

**SERVICE
MANUAL**

**ASTRO 102 BX
TRANSCEIVER**



CUBIC

COMMUNICATIONS, INC.

SWAN DIVISION

SALES BULLETIN

OCTOBER, 1980

CONFIDENTIAL

ADVANCE INFO:

TO: ALL AMATEUR DEALERS

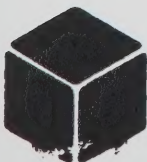
SUBJECT: NEW AMATEUR PRODUCTS, ASTRO 103, 1500ZA

We are pleased to announce our new Astro 103, nine band transceiver. This professional grade HF/SSB transceiver is similar to our famous Astro 102 BX with several added features, such as the three new WARC bands recently approved in Geneva with WWV (10 MHz), RTTY mode switch, which automatically selects LSB and switches in the CWN filter. The 400 Hz, six pole crystal filter (CN102) is an option.

The Astro 103 list price will be competitive. The matching AC supply is the model PSU-6A which is similar to that as used on the Astro 102 BX. For more information see the enclosed data sheet. Delivery of the Astro 103 will begin early in the New Year. Without doubt, the Astro 102 BX will be continued alongside its big brother!

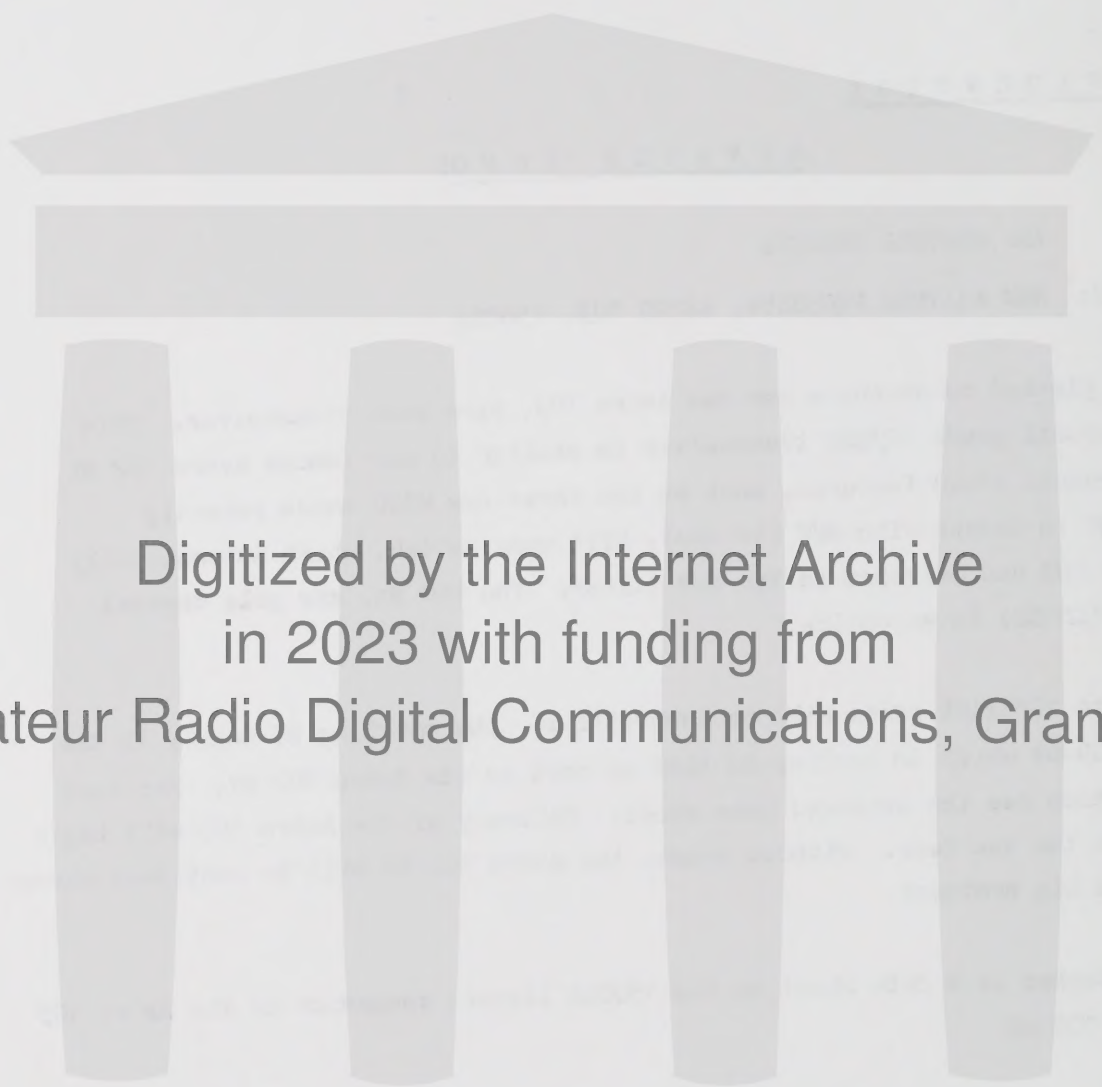
Also attached is a data sheet on the 1500ZA linear, companion to the Astro 103 and the 102 BX

C For Service Manuals
MAURITRON SERVICES
8 Cherry Tree Road, Chinnor
Oxfordshire, OX9 4QY.
Tel (01844) 351694
Fax (01844) 352554
email: mauritron@dial.pipex.com



CUBIC COMMUNICATIONS, INC.

305 Airport Road, Oceanside, CA 92054 (714) 757-7525 / Telex: 695435; ANS BK: Cubicom, OCEN.



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<https://archive.org/details/astro102bx00unse>

Travis Family

From: "Fred C. Maxwell, Ph.D." <fcm2@ix.netcom.com>
To: "Travis Family" <olg77tr@bellsouth.net>
Sent: Friday, January 04, 2008 5:22 PM
Subject: RE: Swan Astro 102BX manual

Hello John,

I trust that you are well; I just picked up my Astro 102BX from a friend who was trouble shooting that for me.

Al, K4ICL was unable to continue on the repair because the following pages are missing from the manual:

8-45

8-46

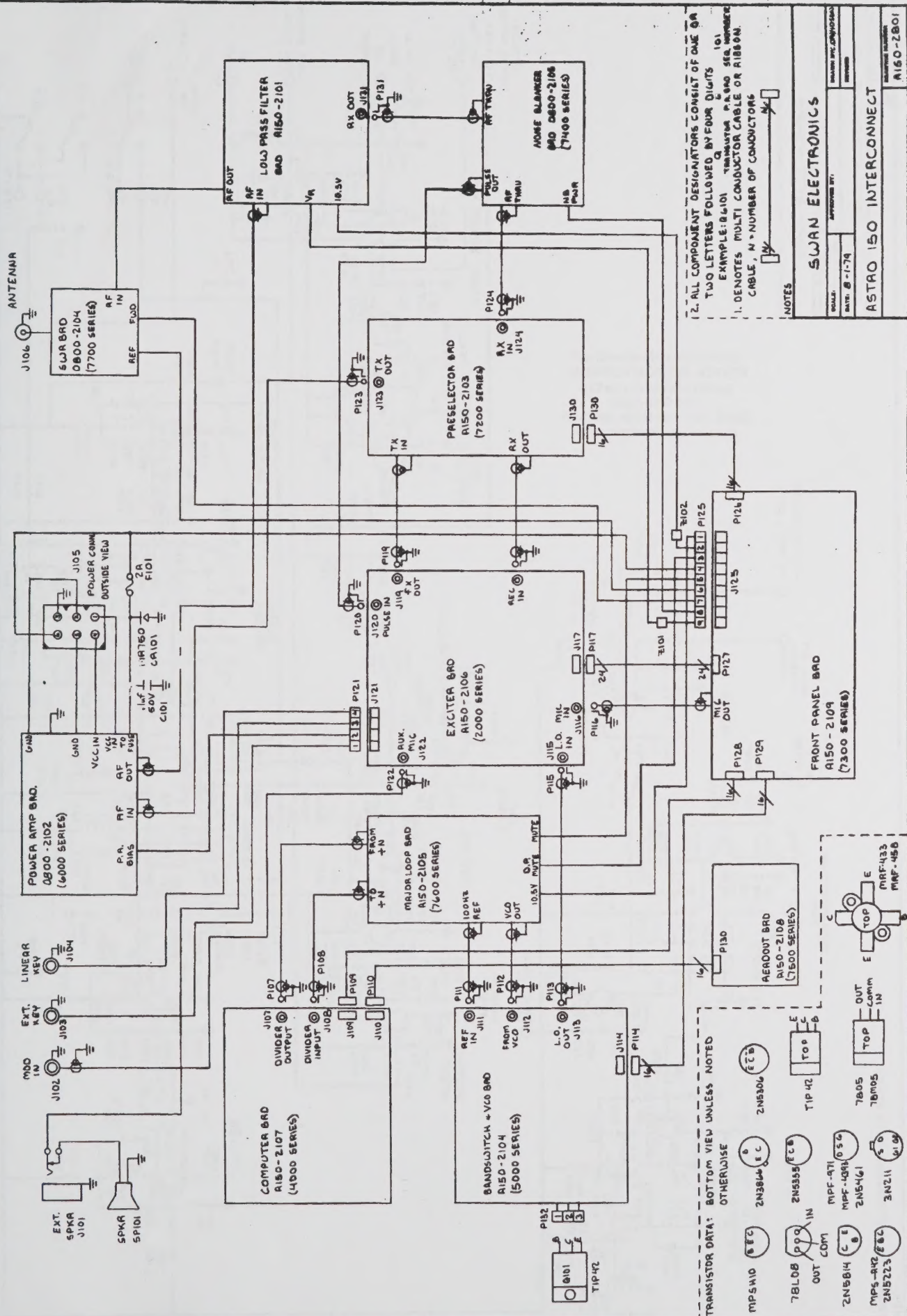
8-47

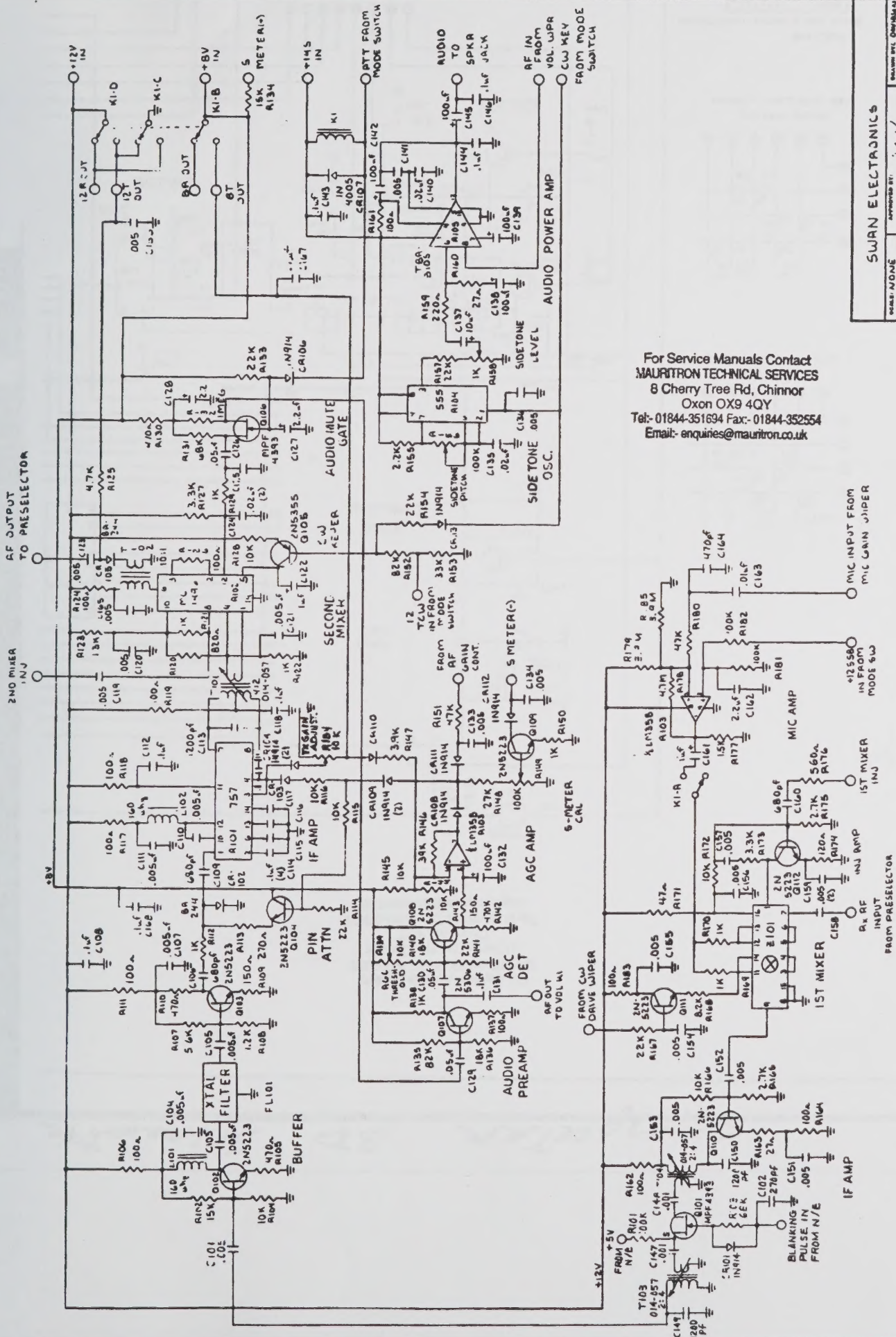
If you can get these to me, someone will continue on with the repair.

Thanks!

Fred
W4FCM

*Fred
Attached may/may not
be precisely the ASTRO
102BX but MAY help.
John
CD enclosed (79 pages)*



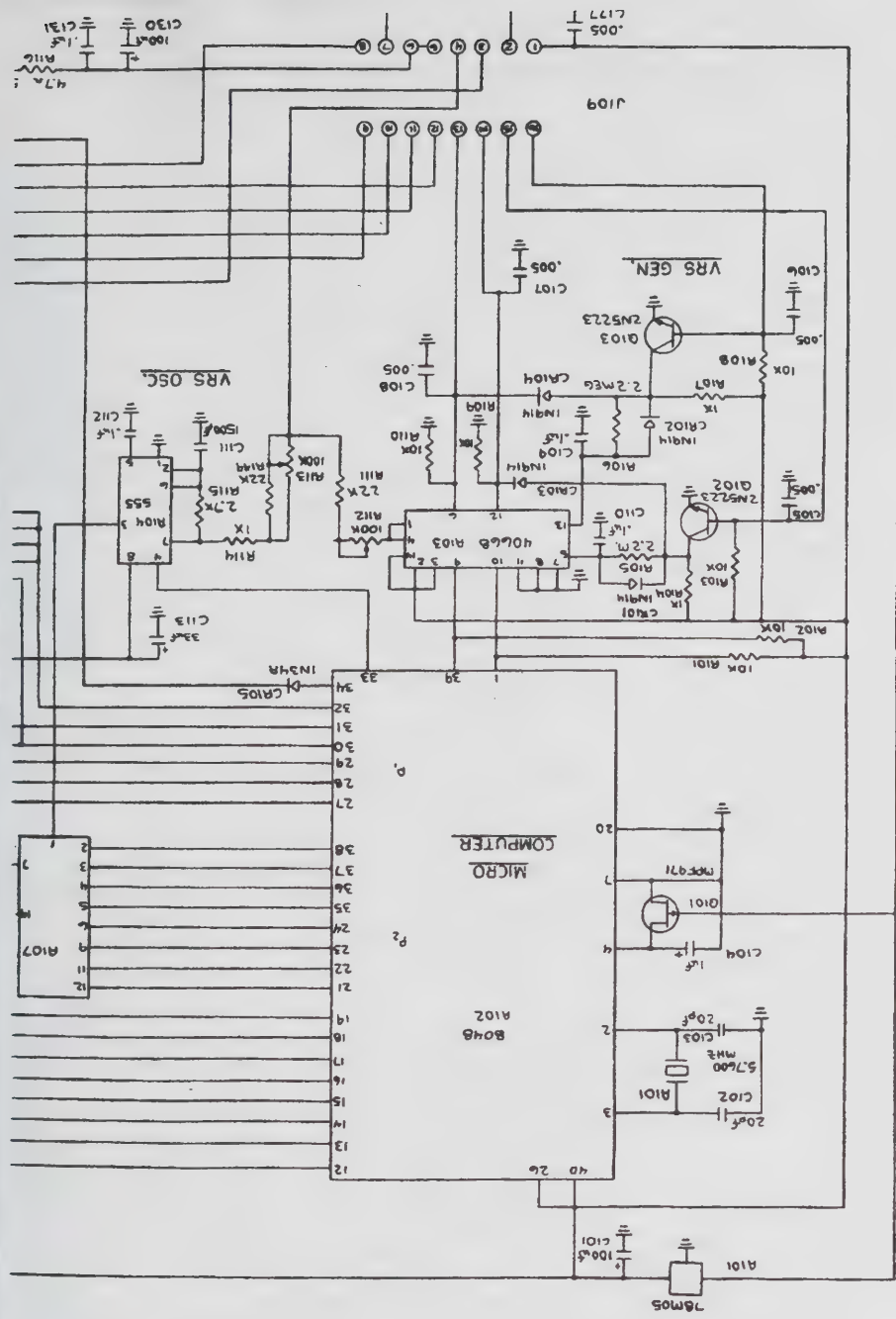


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 Email: enquiries@mauratron.co.uk

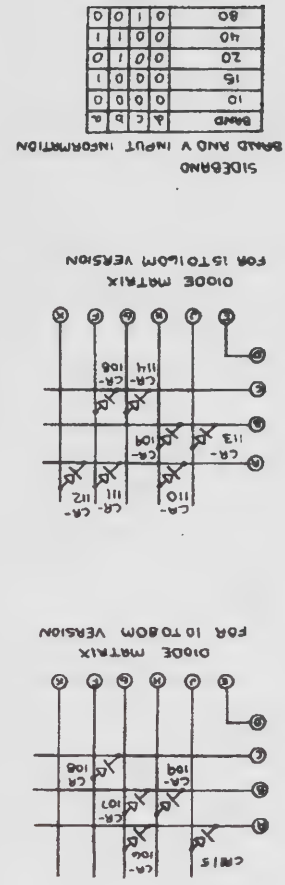
SWAN ELECTRONICS

DESIGNED BY	APPROVED BY
DATE: 9-21-78	SERVICE
EXCITER BAD SCHEMATIC 038-1898	REV
	PA 2

1. COMPONENT DESIGNATORS 2000 SERIES
 NOTES:



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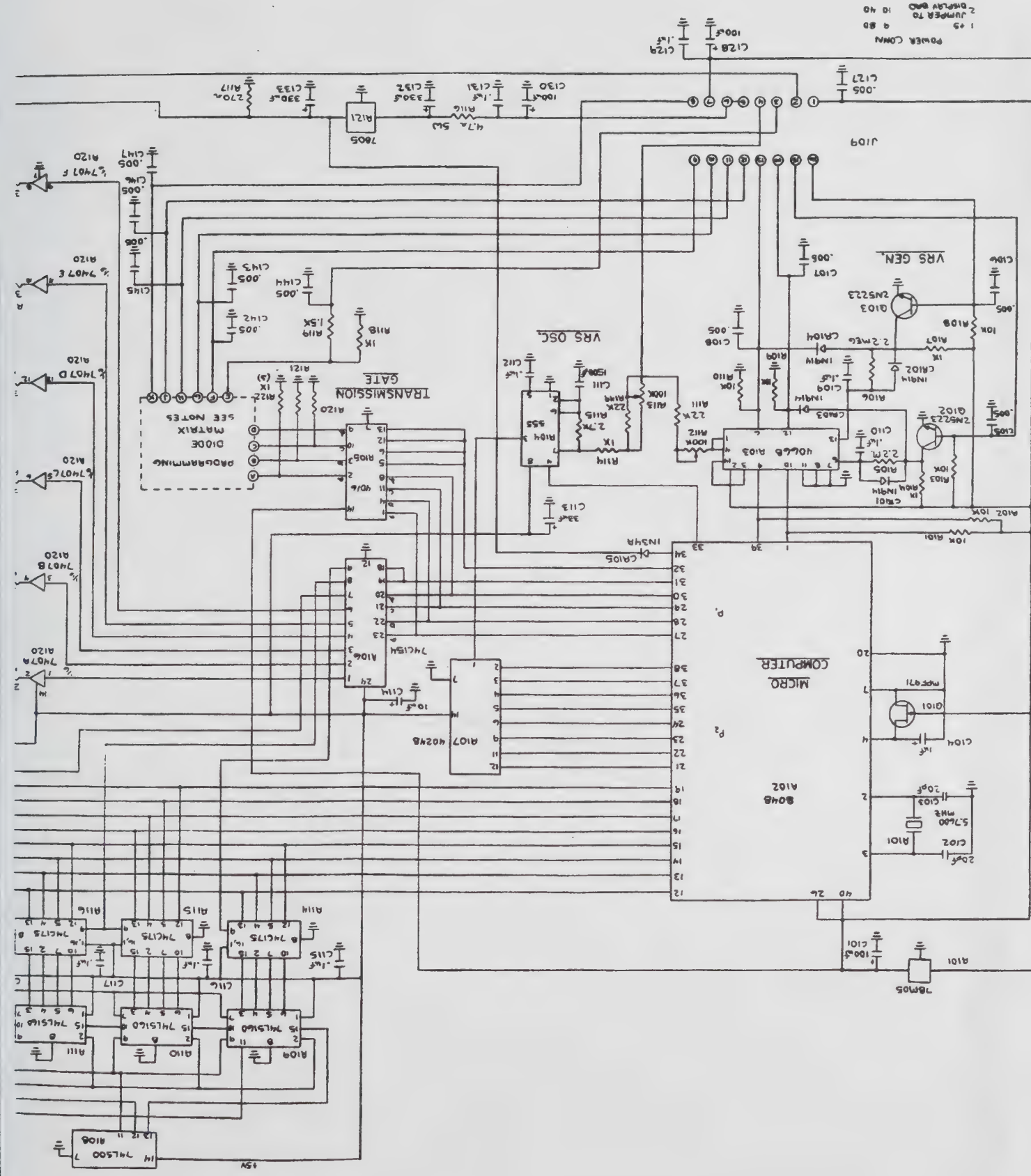


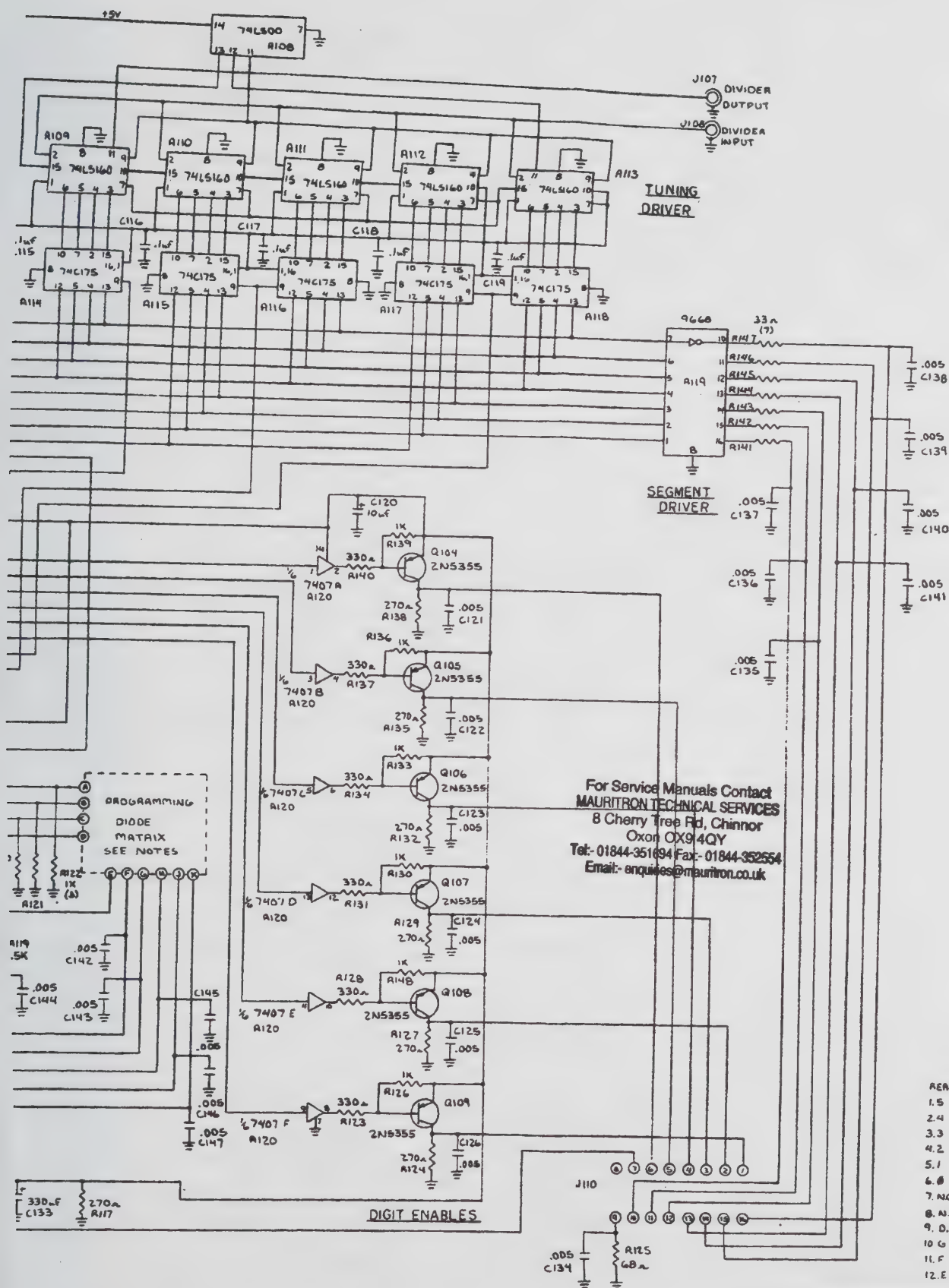
SIDE BRAND
 BRAND AND V INPUT INFORMATION

BRAND	A	C	B	A
10	0	0	0	0
15	0	0	0	0
20	0	0	0	0
40	0	0	0	0
80	0	0	0	0

Computer BD Scholastic

- POWER CONN
- 1 +5
 - 2 GND
 - 3 -5
 - 4 +5
 - 5 +5
 - 6 +5
 - 7 +5
 - 8 +5
 - 9 +5
 - 10 +5
 - 11 +5
 - 12 +5
 - 13 +5
 - 14 +5
 - 15 +5
 - 16 +5





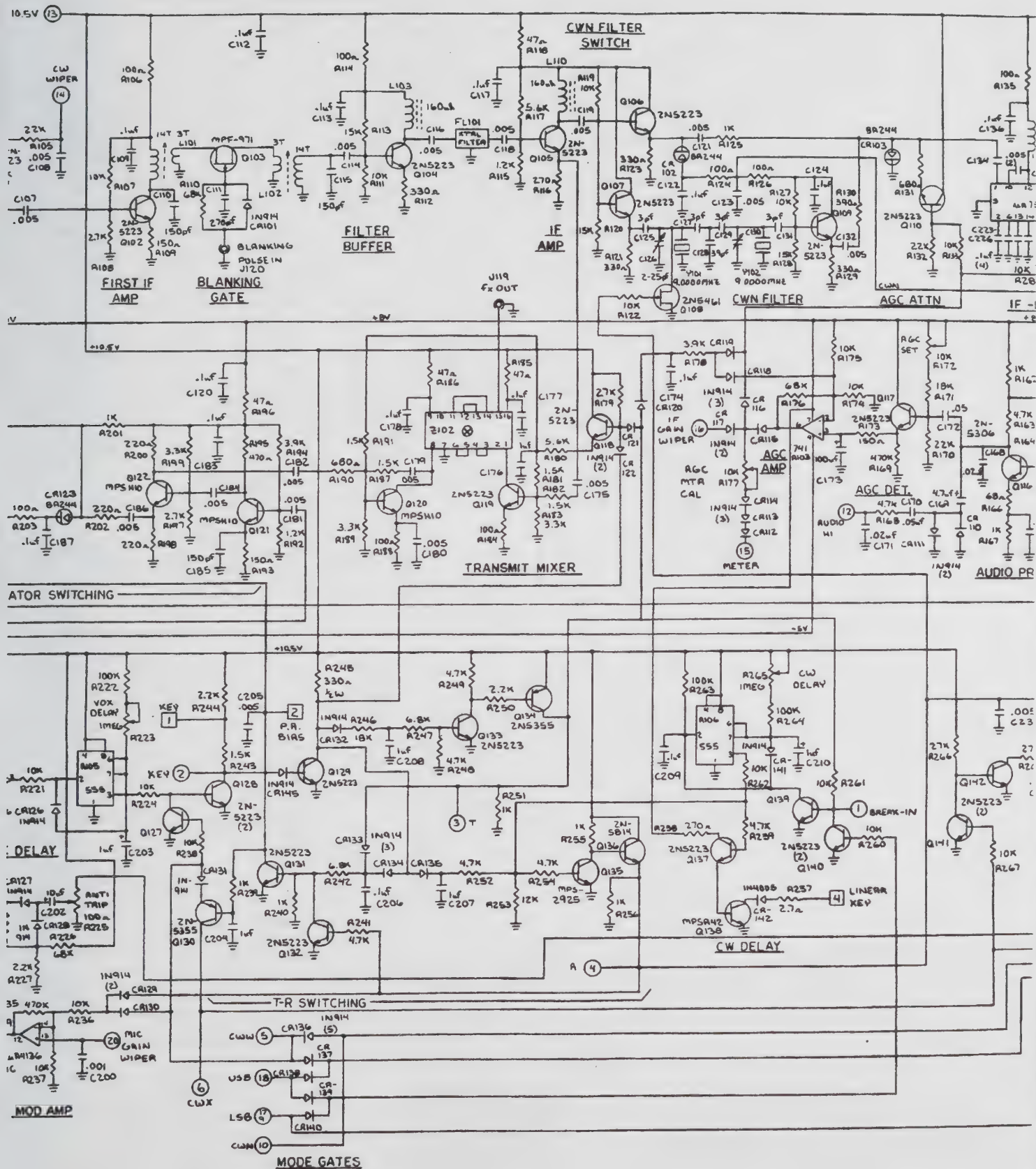
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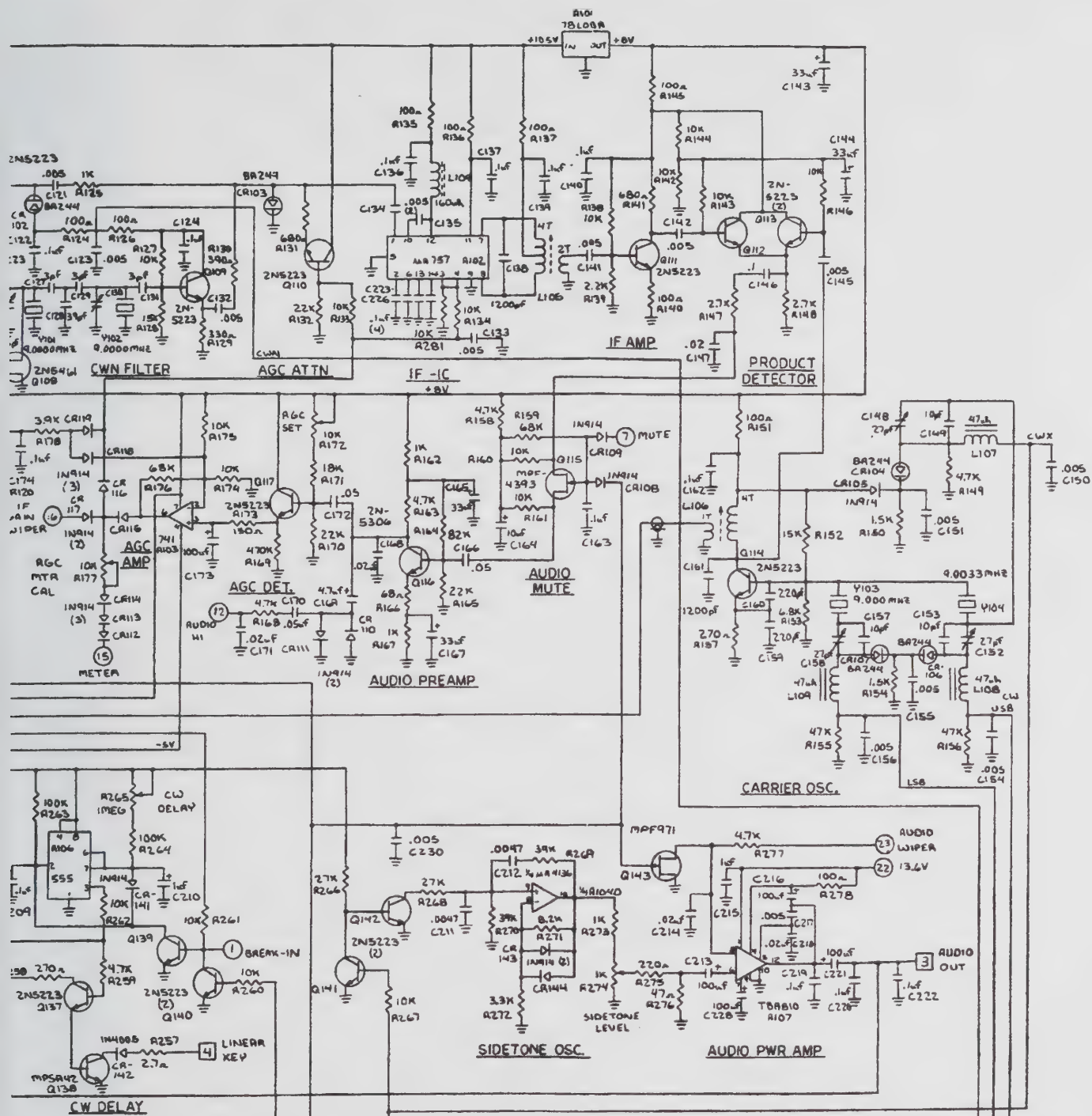
READOUT COMAS.	
1.5	13.0
2.4	14.0
3.3	15.0
4.2	16.0
5.1	
6.0	
7.0	N.C.
8.0	N.C.
9.0	D.P.
10.0	G
11.0	F
12.0	E

SWAN ELECTRONICS

SCALE: NONE	APPROVED BY: <i>gw</i>	DESIGNED BY: L. DAVIES
DATE: 7-31-79		
COMPUTER BRO SCHEMATIC		
DRAWING NUMBER: A150-2407		

—continued from p. 10—





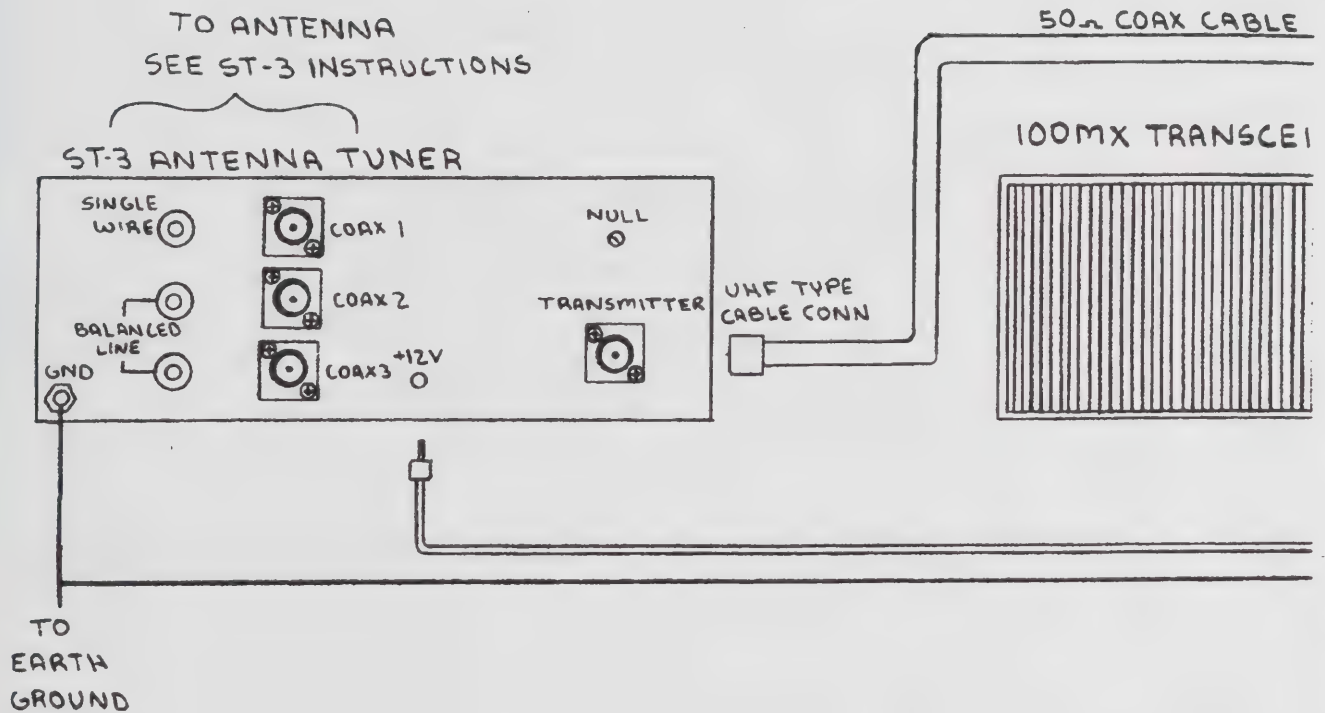
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 Email: enquiries@mauritron.co.uk

A	C209 CHANGE .1uF D.C. TO .1uF STAB. C215 CHANGE .1uF D.C. TO .1uF STAB. CD.83179	R-31-77	gw
LT#	DESCRIPTION	DATE	APPD
REVISIONS			
SWAN ELECTRONICS			
CHG# NONE	APPROVED BY: gw	REVISIONS BY: Off Engineer	
DATE: 7-31-79		SIGNED	
EXCITER BAD SCHEMATIC			
REVISIONS		R150-7406B	

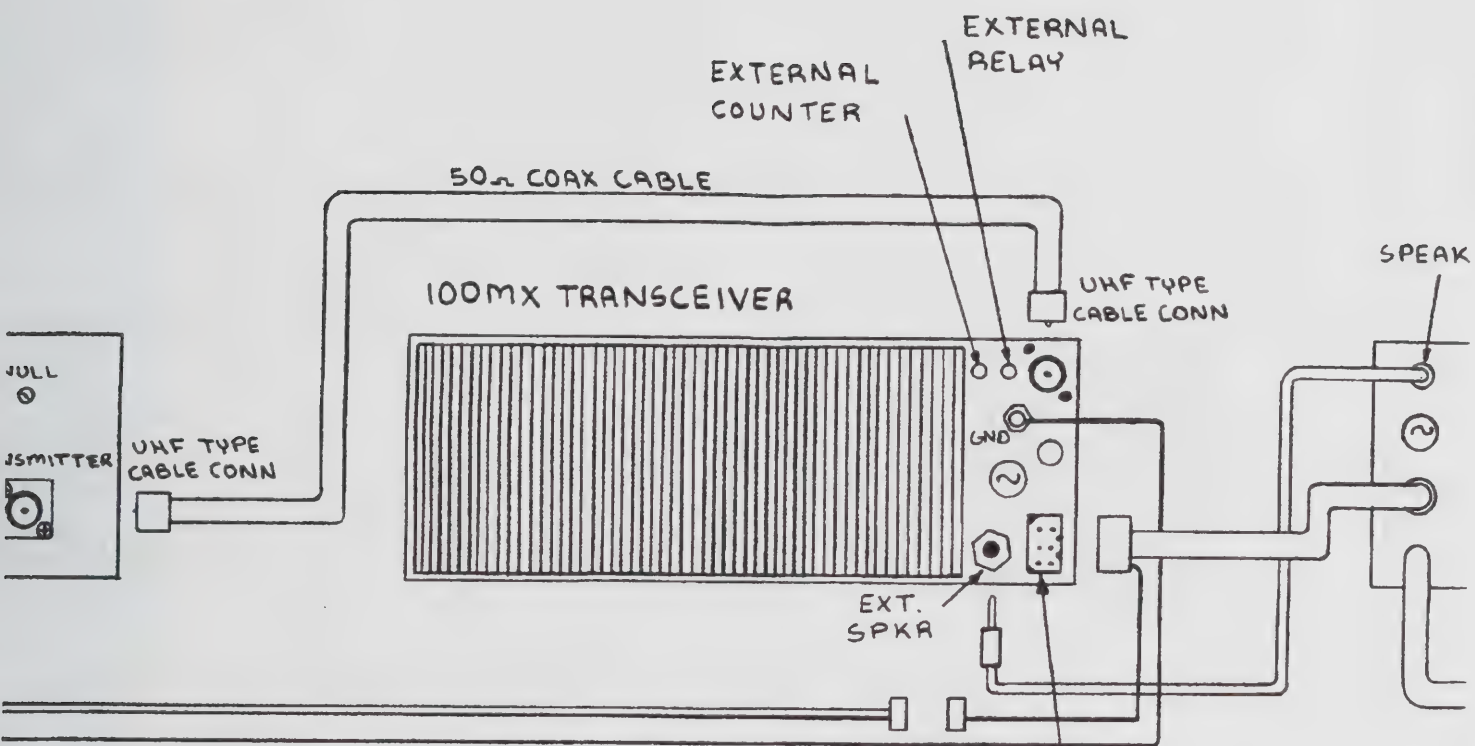
SYSTEM INTERCONNECT Diagram

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Email: enquiries@mauritron.co.uk

E
C



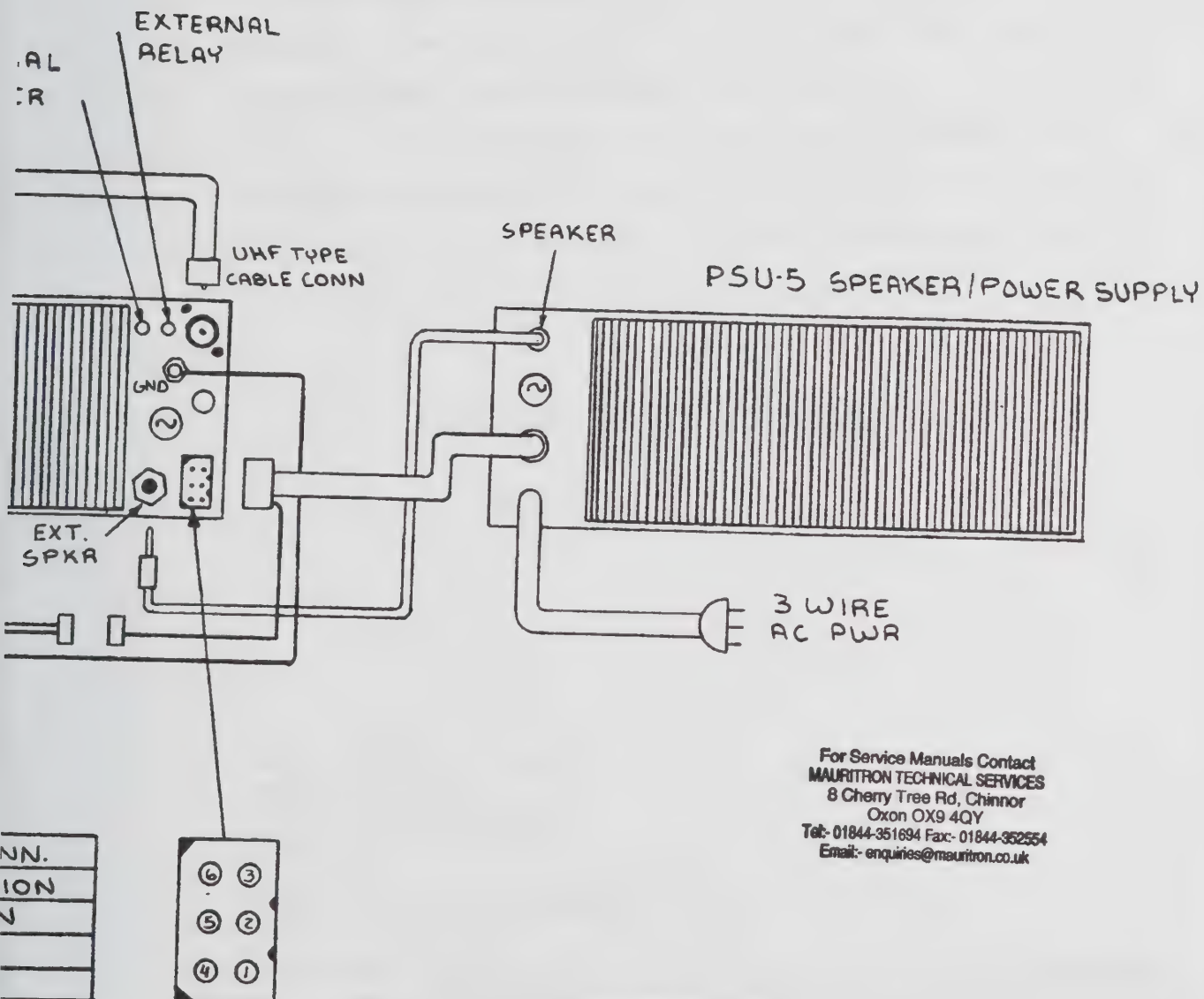
POL
PIN
1
2
3
4
5
6



POWER CONN.	
PIN	FUNCTION
1	14V IN
2	GND
3	GND
4	14V IN
5	GND
6	14V OUT



SW
SCALE: NONE
DATE: 10-18-78
SYSTEM



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SWAN ELECTRONICS

SCALE: NONE

APPROVED BY:

DRAWN BY: DAVIDSON

DATE: 10-18-78

REVISED

SYSTEM INTERCONNECT DIAGRAM

DRAWING NUMBER

FIGURE 3-1

MODIFICATION FOR ASTRO 102EX

Referring to Figure #2, add (2) .001 microfarad capacitors from the microphone and key lines to ground as shown on the diagram. These capacitors will be labeled C104 and C105 respectively. The attached partial schematic of the Astro 102EX Main Chassis and Interconnect diagram will show the electrical location of these capacitors that are to be added. This modification when incorporated into the Astro 102EX will minimize the RF feedback.

PARTS REQUIRED FOR ABOVE MODIFICATION

2	.001 microfarad capacitors	072-006
---	----------------------------	---------

Cubic Communications
Swan Division
305 Airport Rd.
Oceanside, CA 92054

Phone: 714-757-7525 Ext. 228, 229
Telex: 695435; CUBICOM, OCEN.

Enclosure: Figure #2
Partial Schematic Main Chassis and Interconnect
of Astro 102EX

ASTRO 102BX
(INSIDE VIEW OF FRONT PANEL)

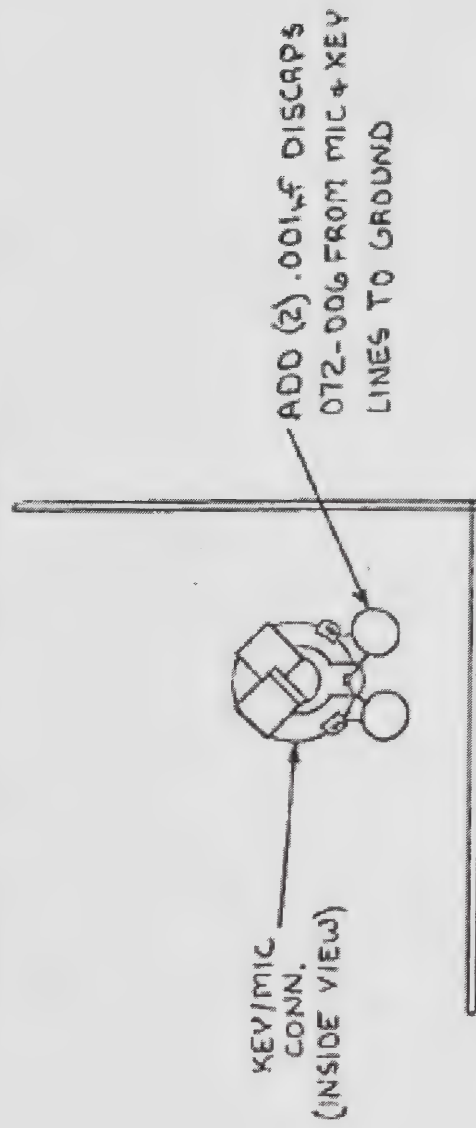
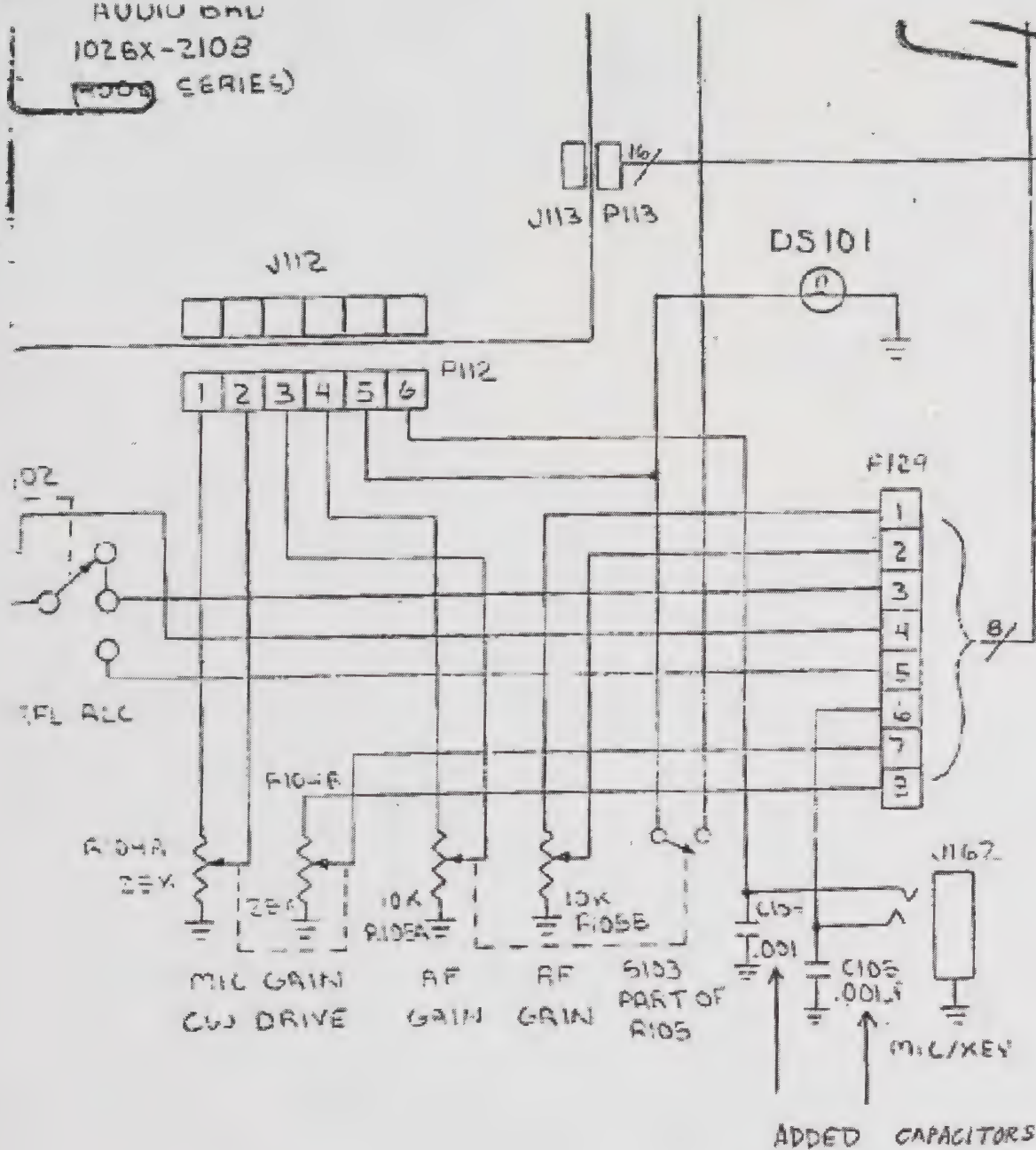
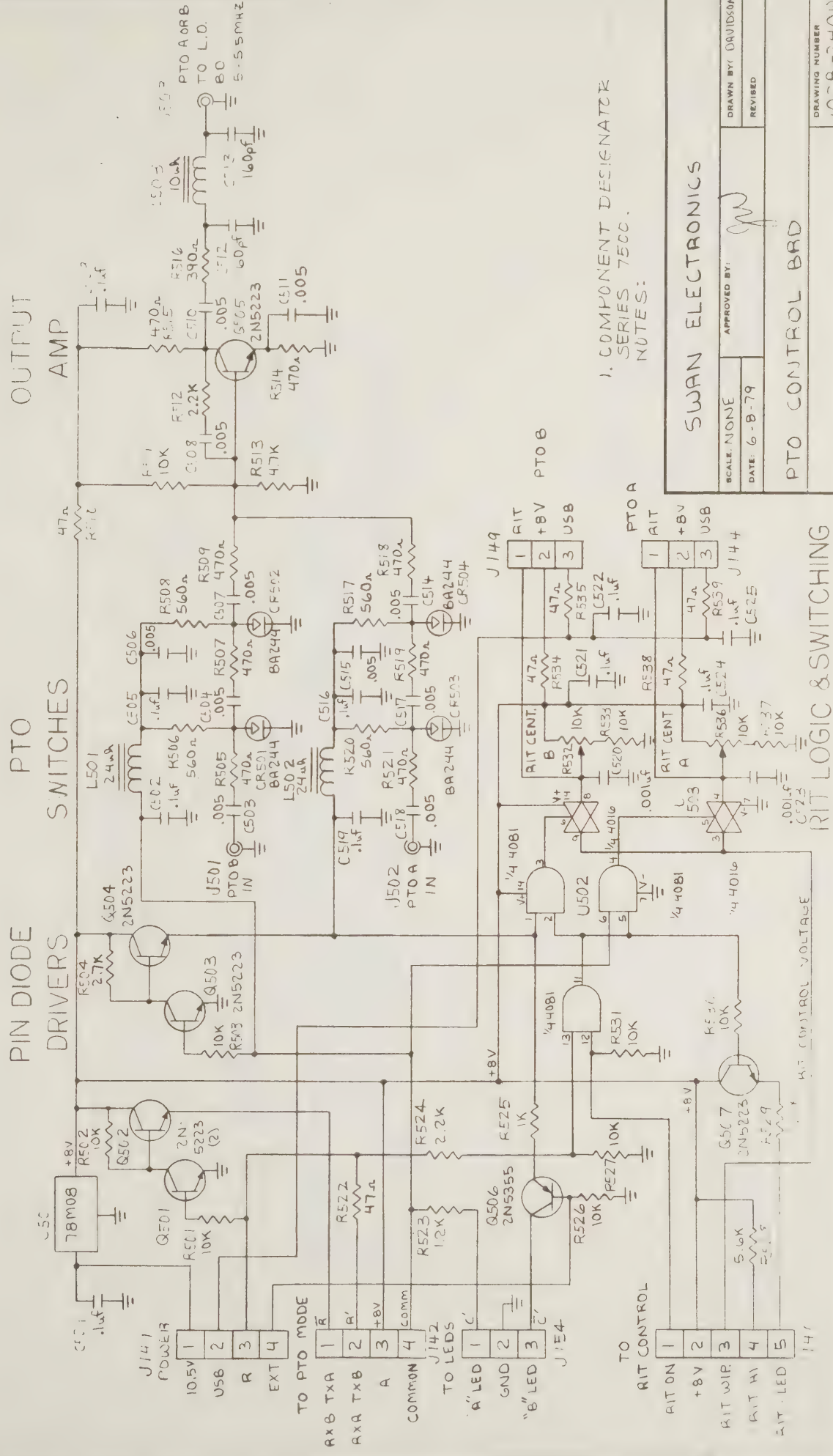


FIGURE 2

AUDIO BAND
1026X-2108
SERIES





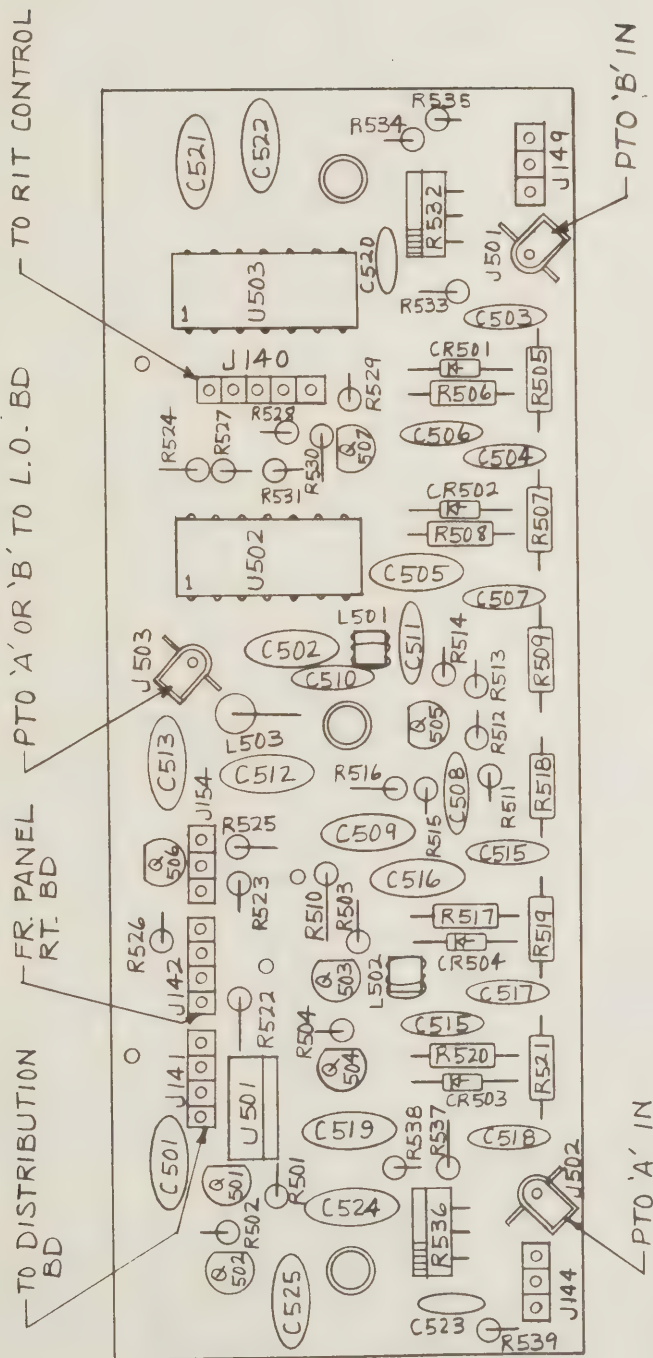
SWAN ELECTRONICS

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DATE: 6-8-79		REVISED

PTO CONTROL BOARD

DRAWING NUMBER
102B-2401A

RIT LOGIC & SWITCHING



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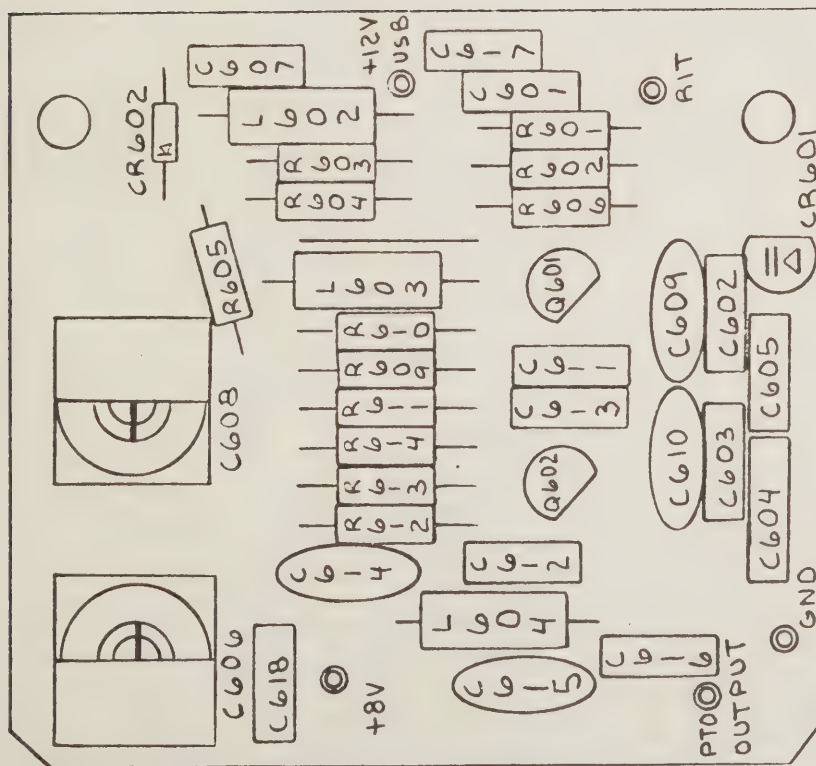
SCALE: ~
DATE: 9-18-79
APPROVED BY: [Signature]
REVISED

PTO CONTROL BOARD LAYOUT

DRAWING NUMBER
102BX-2301

2. COMPONENT DESIGNATORS: 7500 SERIES
1. REF. ELEC. ASSY 102BX-2001
- REF CIRCUIT BD 102BX-2101
- REF DRILL DWG 102BX-2201

NOTES:



SWAN ELECTRONICS

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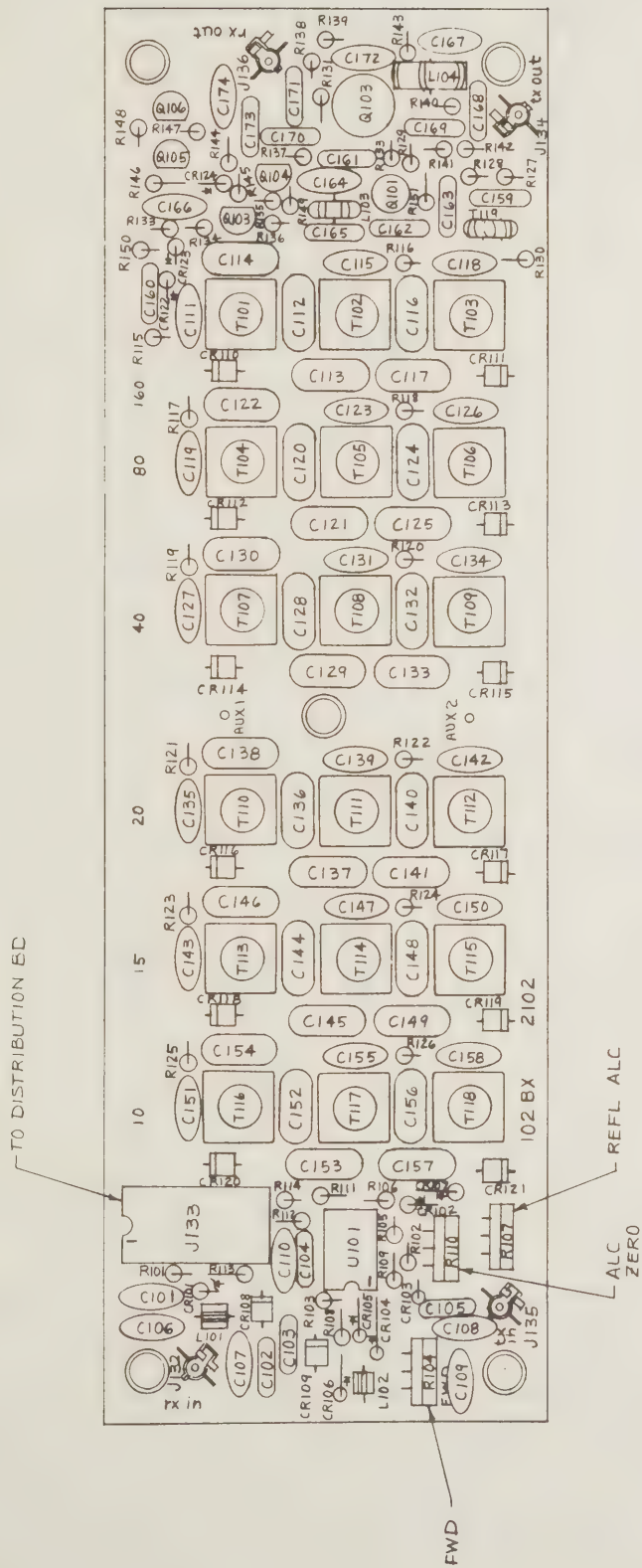
PTO BRD LAYOUT

DRAWING NUMBER

0800-2305

I. COMPONENT DESIGNATORS 7600 SERIES

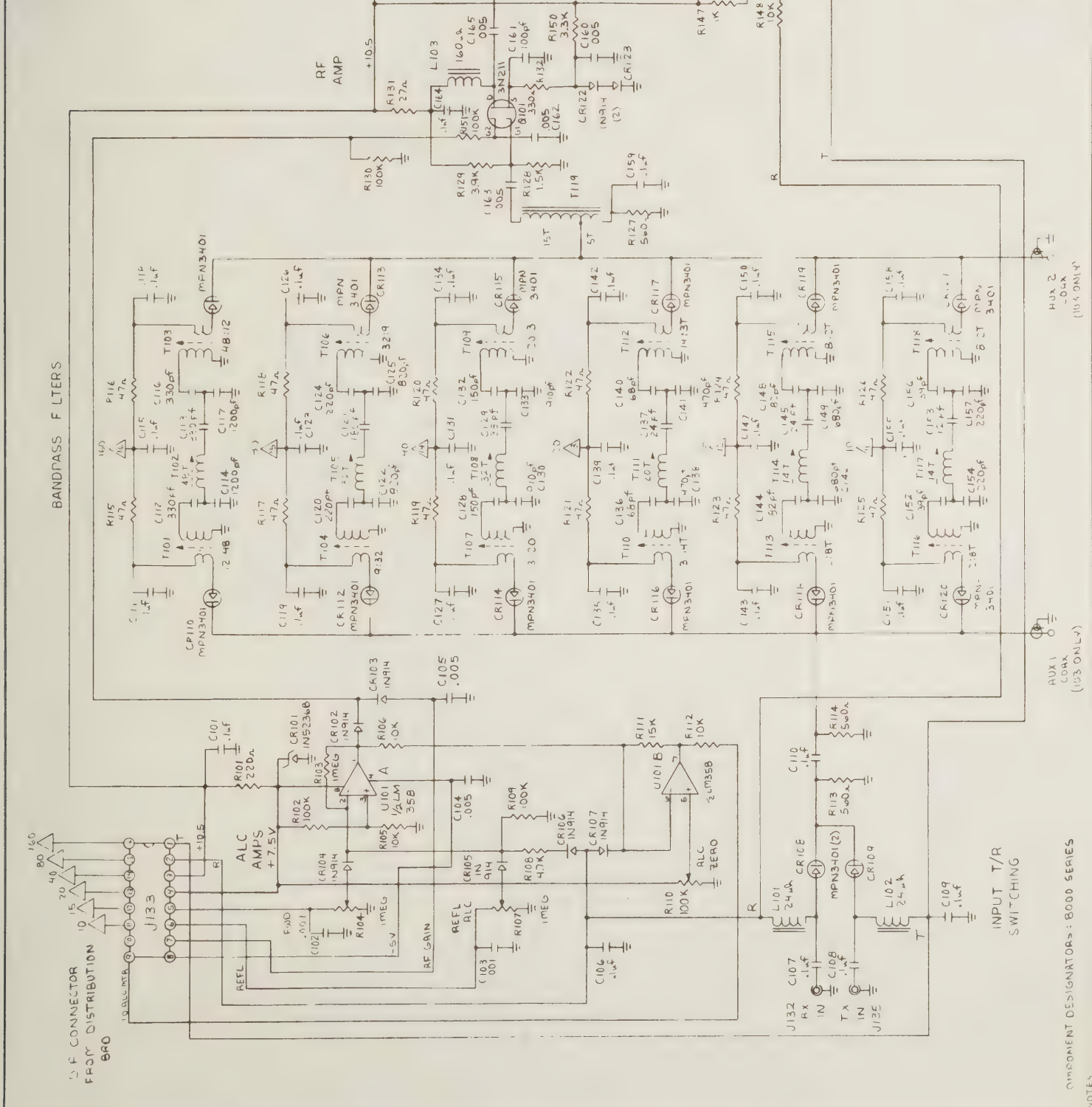
REVISIONS		DATE	APPROVED
TR	DESCRIPTION		
A	ADDED LABELS FOR COAX CONN. FOR ASTRO 103	7-24-79	02
34	CO 7-10-80		



SWAN ELECTRONICS		DESIGNED BY	DATE	REVISED
SCALE NONE		APPROVED BY	7-24-79	
PRESELECTOR BOARD		LAYOUT		
REV	DATE	BY	REVISION NUMBER	
A			102BX-2302	

2. COMPONENT DESIGNATION SERIES 8000 -
 1. REF. ELECT. ASSY 102BX-2002
 REF. CIRCUIT BD 102BX-2102
 REF. DRILL DWG 102BX-2202
 NOTES:

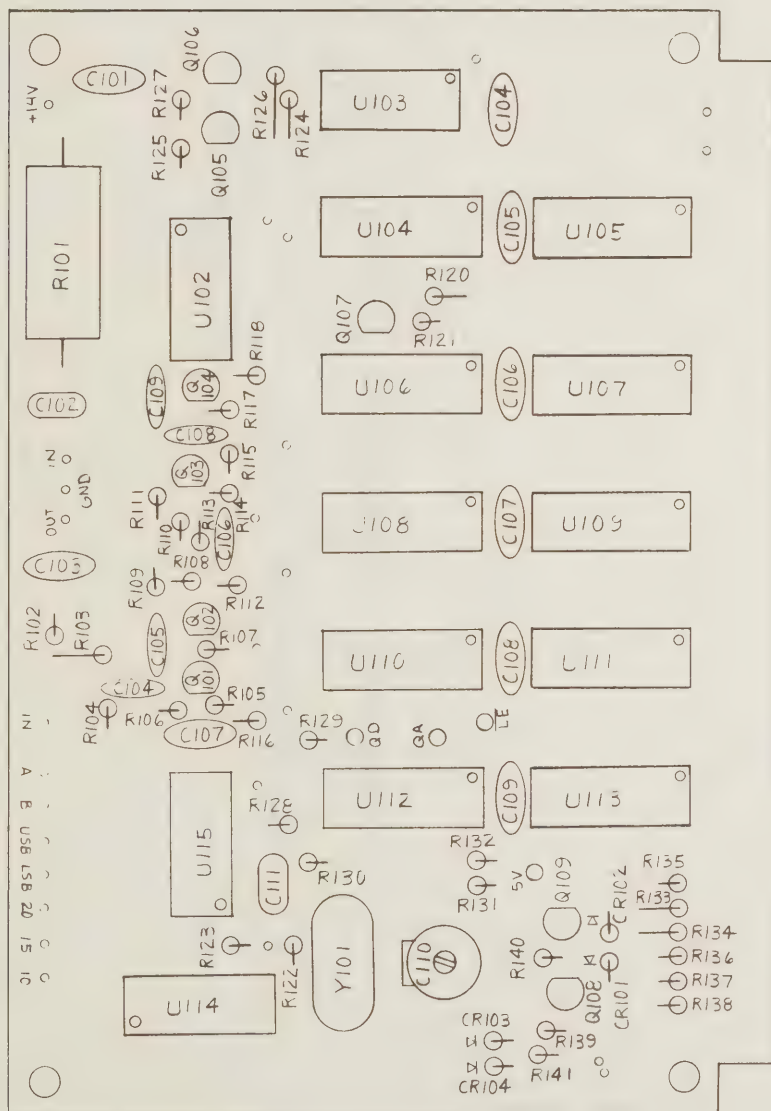
REV	REVISION	DATE	APPRO
1	REVISED CONDUCTOR 315 FOR 7-24-80	7-24-80	CH
2	REVISED CONDUCTOR 315 FOR 7-24-80	7-24-80	CH
3	REVISED CONDUCTOR 315 FOR 7-24-80	7-24-80	CH
4	REVISED CONDUCTOR 315 FOR 7-24-80	7-24-80	CH
5	REVISED CONDUCTOR 315 FOR 7-24-80	7-24-80	CH
6	REVISED CONDUCTOR 315 FOR 7-24-80	7-24-80	CH
7	REVISED CONDUCTOR 315 FOR 7-24-80	7-24-80	CH
8	REVISED CONDUCTOR 315 FOR 7-24-80	7-24-80	CH
9	REVISED CONDUCTOR 315 FOR 7-24-80	7-24-80	CH
10	REVISED CONDUCTOR 315 FOR 7-24-80	7-24-80	CH



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SCALE NONE	APPROVED BY <i>WU</i>
DATE 6-1-80	REVISED
DRAWING NUMBER PRESECTOR BAD 1028X	
REV B	DRAWING NUMBER 028-2402

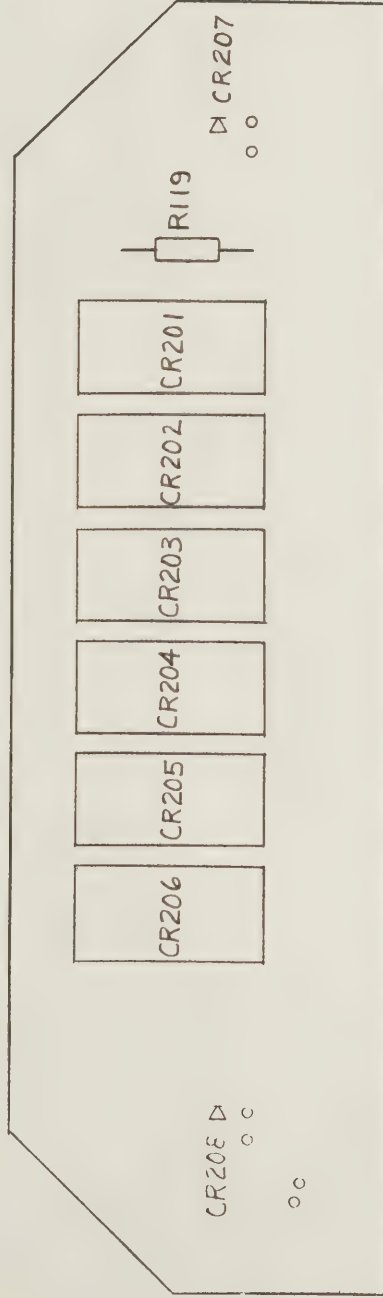
NOTES: 1. COMPONENT DESIGNATORS: 8000 SERIES 2. PRINTED ON NO. 1000-6 FILAMENTARY PAPER CUT

REVISIONS		DATE
LTR	DESCRIPTION	APPD
A	ADDED INFORMATION TO AUX COUNTER BD CD 4-8-81	11/15
EN		1/82
58		



2. COMPONENT DESIGNATORS 7100 SERIES
 1. REF. ELEC. ASSY 102EX-2005
 REF. CIRCUIT BD 102BX 2105
 REF. DRILL DWG 102BX 2205
 NOTES:

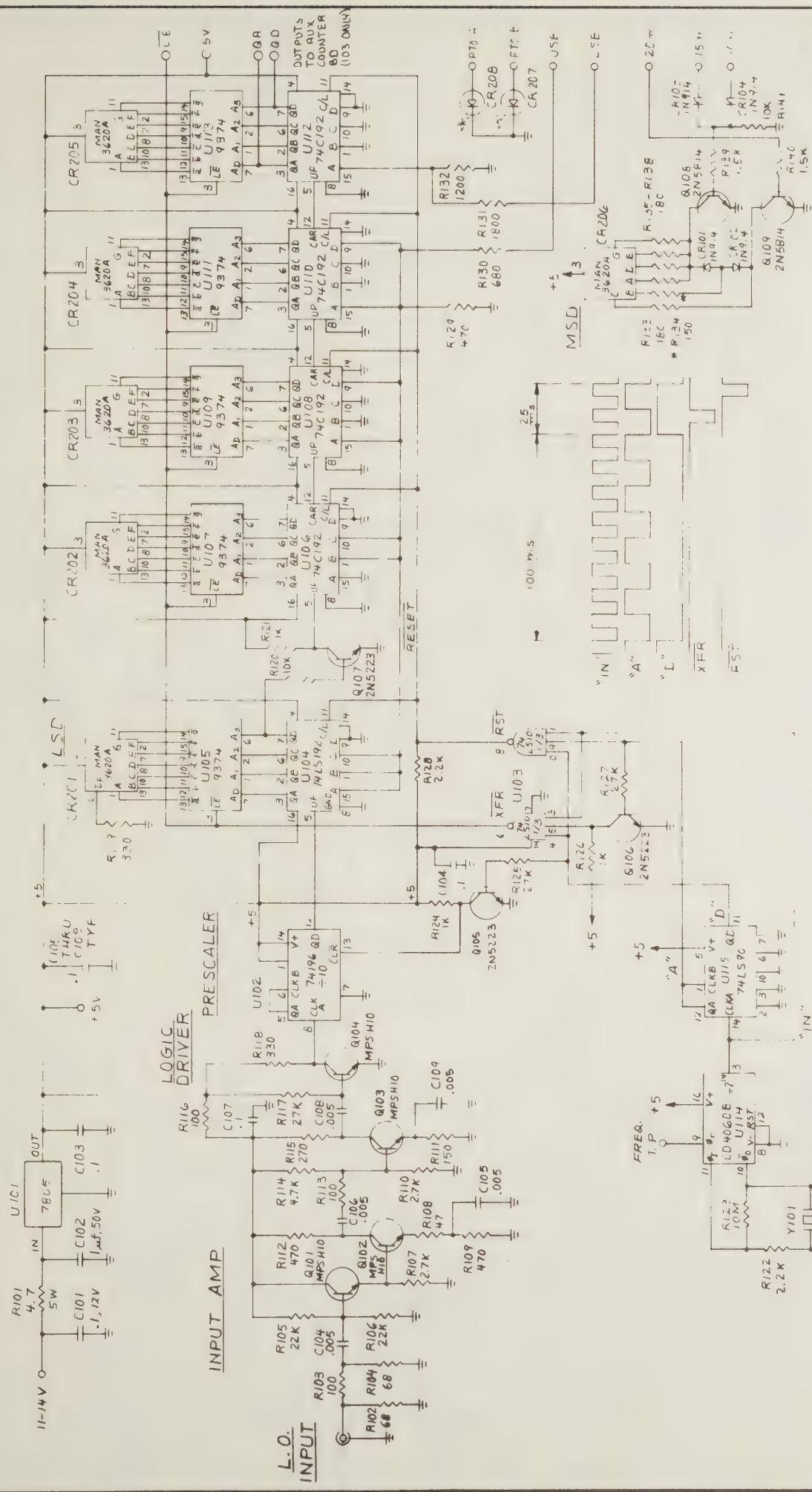
CUBIC CORPORATION INCORPORATED IN THE U.S.A.		APPROVED BY	DATE	REV	REVISION NUMBER
DRAWN BY AUG		REVIEWED	102BX-2305		
9/19/74		COUNTER BOARD LAYOUT			
SCALE ~		REV A			



2. COMPONENT DESIGNATOR SERIES 7200
 1. REF. ELECT. ASSY 102BX-2006
 REF. CIRCUIT BD 102BX-2106
 REF. DRILL DWG 102BX-2206
 NOTES:

SWAN ELECTRONICS			
SCALE: ~	APPROVED BY: JW		DRAWN BY: A.J.G.
DATE: 9-19-79			REVISED
DISPLAY BOARD LAYOUT			
			DRAWING NUMBER 102BX-2306

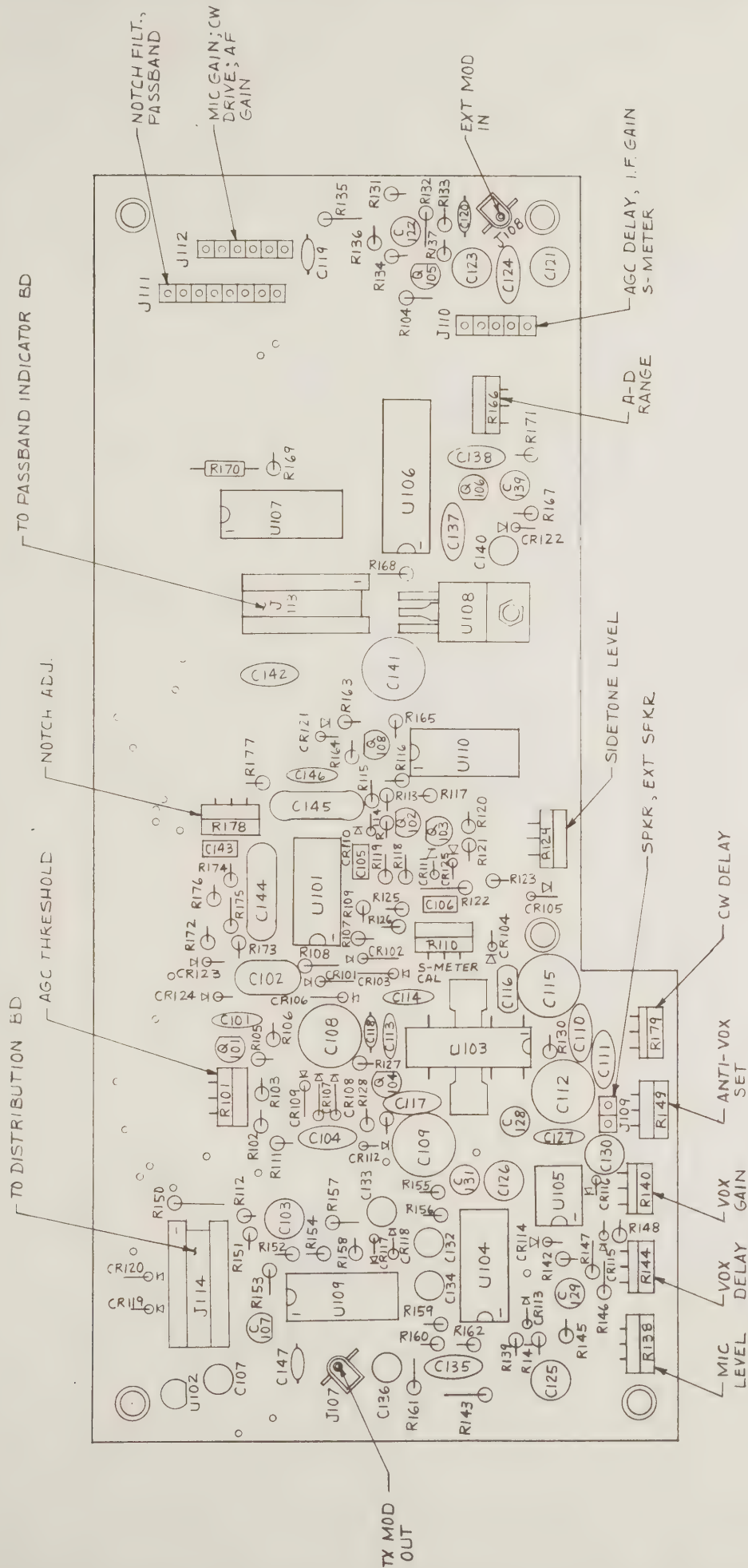
REVISIONS		DATE	APPRO
LTR	DESCRIPTION		
B	ADDED OUTPUTS TO AUX COUNTER BD	CO 4-8-81	
58			





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A103-2403

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LTR	DESCRIPTION	APPRO. DATE
A	ROTATED R124 180°	4/2/81
ECN	59	CD 4-B-81

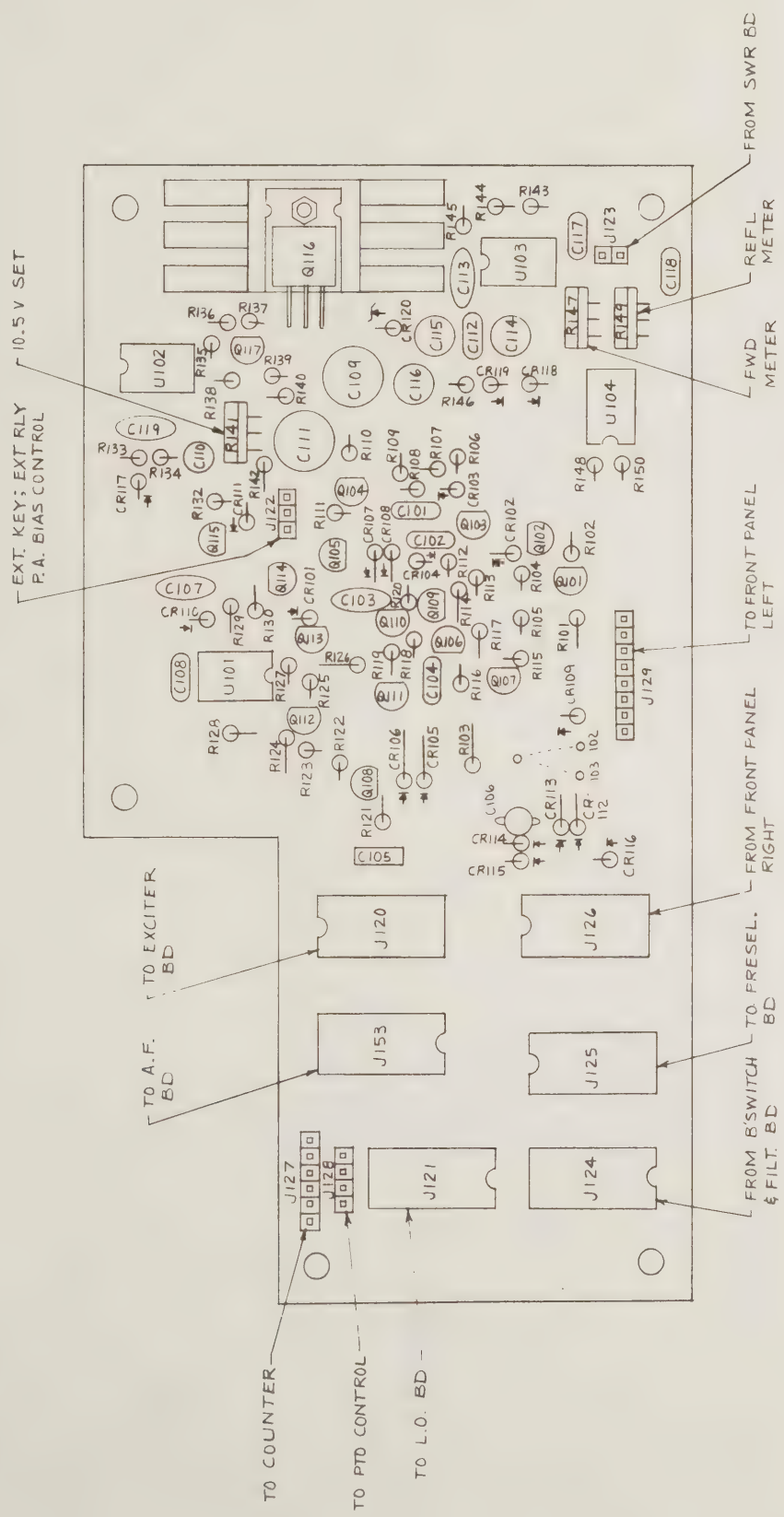


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SCALE: NC/NE	APPROVED BY: <i>[Signature]</i>
DATE:	REVISED:
AUDIO BOARD LAYOUT	
DRAWING NUMBER:	102BX-2308

2. COMPONENT DESIGNATORS 4000 SERIES.
 1. REF. ELECT. ASSY 102BX-2008
 REF. CIRCUIT BOARD 102BX-2108
 REF. DRILL DWG 102BX-2208

NOTES:

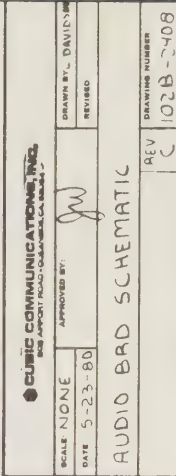
REVISIONS		
LTR	DESCRIPTION	DATE
A	ADDED JUMPER FOR 103	7/25/79
ECN	VERSION	CO 7-10-80
34		



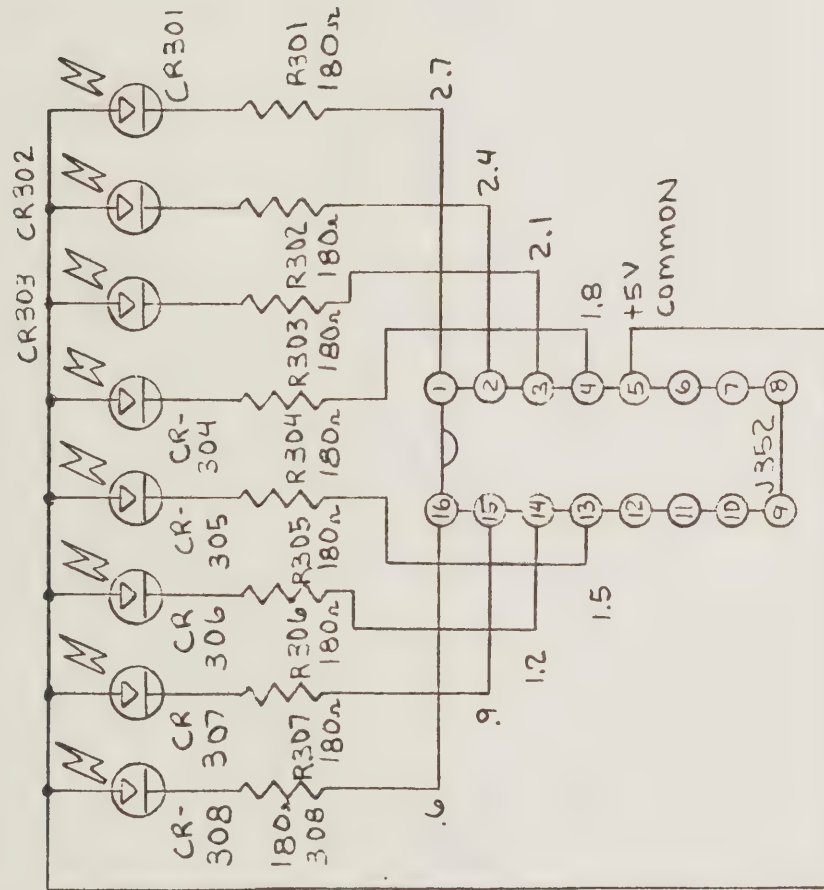
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SCALE NONE	APPROVED BY	DRAWN BY AJG
DATE 7-25-79	REVISED	
DISTRIBUTION BOARD COMPONENT LAYOUT		
REV A	DRAWING NUMBER	102BX-2309

2. COMPONENT DESIGNATORS: 9000 SERIES
 1. REF. ELECT. ASSY 102BX-2009
 REF. CIRCUIT BD 102BX-2109
 REF. DRILL DWG 102BX-2204
 NOTES:

LTR	DESCRIPTION	DATE	APPRO
B EWM 48	CH43 CHANGE FROM 00475 TO 0024f	4/10	J.S.
C EN58	WIRED PIN2 J104 TO AUDIO OUTPUT	4/2/80	J.S.



DATE OF DEPOSIT: 11/11/11



DIP CONNECTOR
FROM AUDIO BRD.

SWAN ELECTRONICS

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APPROVED BY:

DRAWN BY: C. DAVIDSON

DATE: 7-10-79

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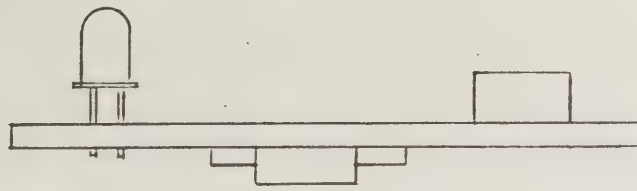
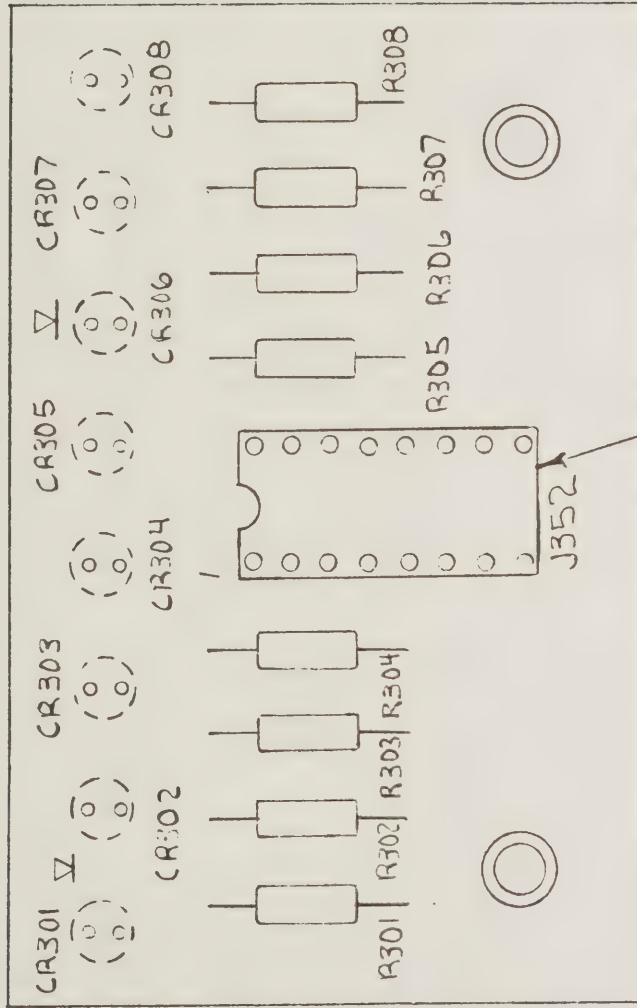
PASSBAND INDICATOR BOARD SCHEMATIC

1. COMPONENT DESIGNATORS 7300 SERIES

NOTES:

DRAWING NUMBER

102B-2411



SWAN ELECTRONICS

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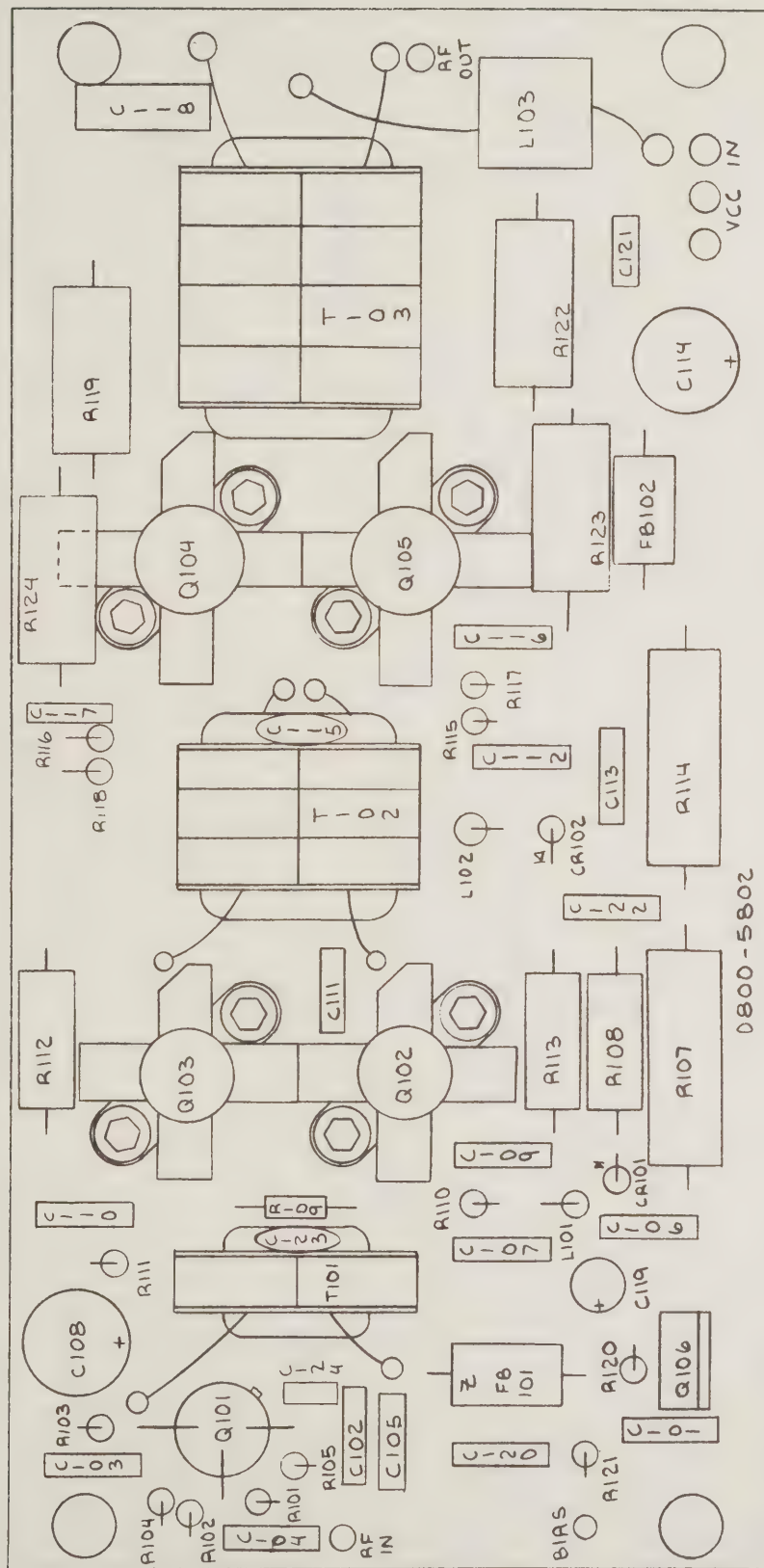
DATE:

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PASSEAND IND. BD LAYOUT
102.FX

DRAWING NUMBER
102 BX-2311

3. REF. ELECTRICAL ASSY 102 BX-2011
- REF. CIRCUIT BOARD 102 BX-2111
- REF. DRILL DWG 102 BX-2211
2. LEADS MOUNTED FAR SIDE.
- COMPONENT DESIGNATORS 7300 SERIES
- NOTES

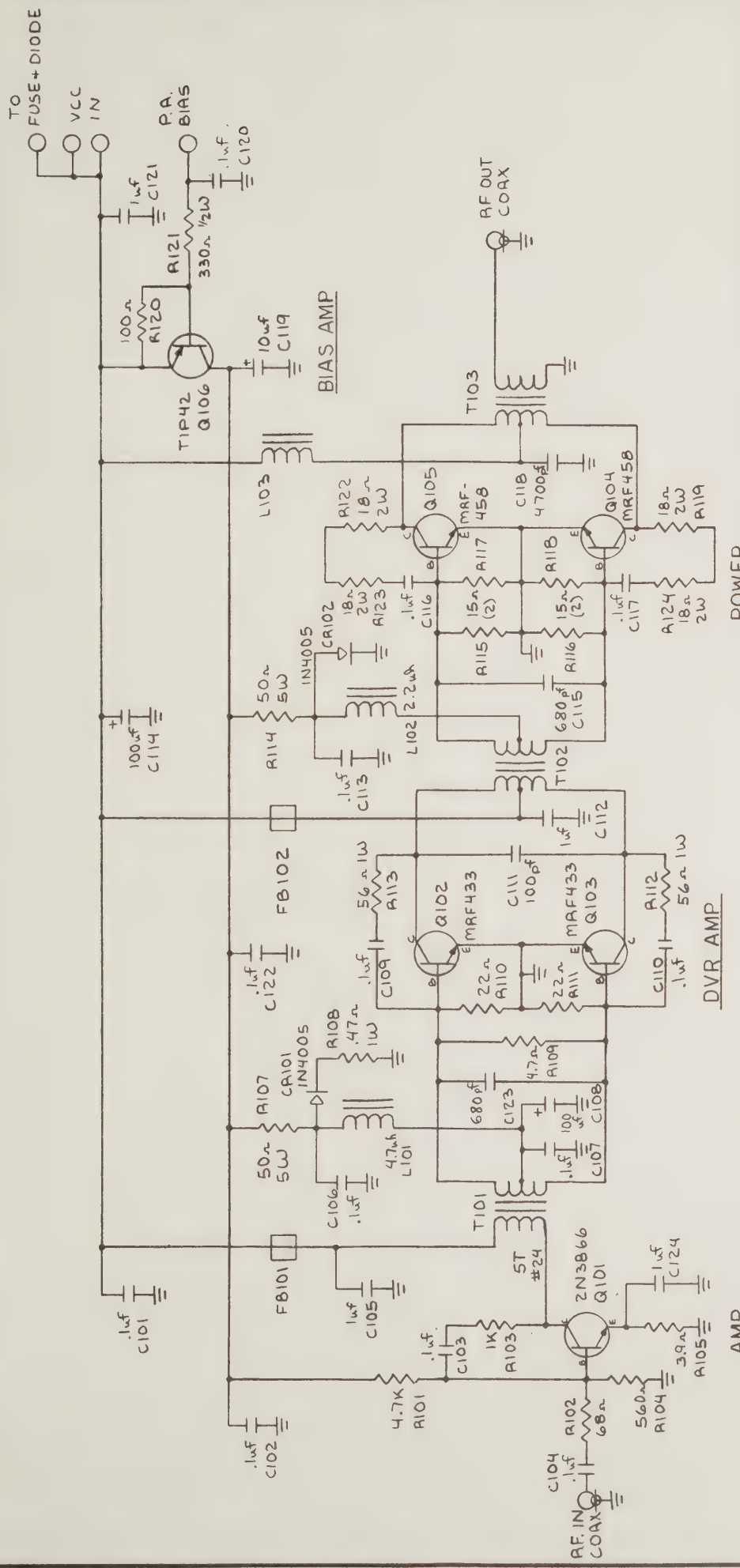


SWAN ELECTRONICS			
SCALE: NONE		APPROVED BY:	DRAWN BY: J. A. V. D. J. A. M.
DATE: 1-2-78			
POWER AMP BOARD LAYOUT			
		DRAWING NUMBER 0800-2302	

1. COMPONENT DESIGNATORS (6000 SERIES)

NOTES:

11817 PRINTED ON NO. 1000H CLEARPRINT



SWAN ELECTRONICS

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DATE: 1-2-78

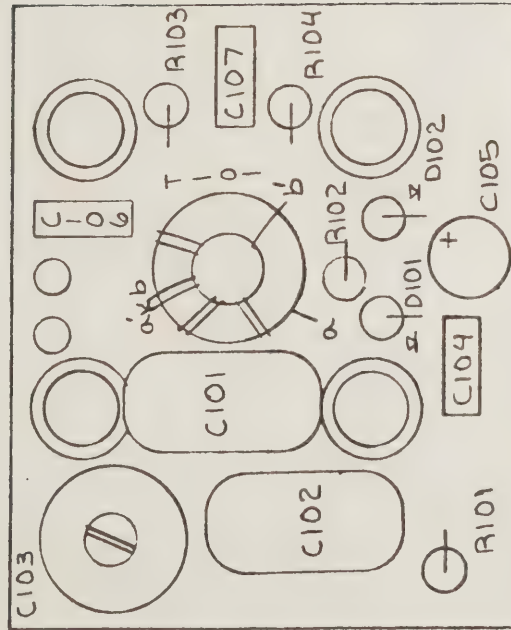
POWER AMP BOARD SCHEMATIC

REV B

DRAWING NUMBER 0800-2402B

REV	DESCRIPTION	DATE	APPROVED
B	REPLACED ALL .05uF CAPS WITH .1uF	6-1-79	JW
LTR	REVISIONS		

1. COMPONENT DESIGNATORS (6000 SERIES)



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DATE: 1-11-79

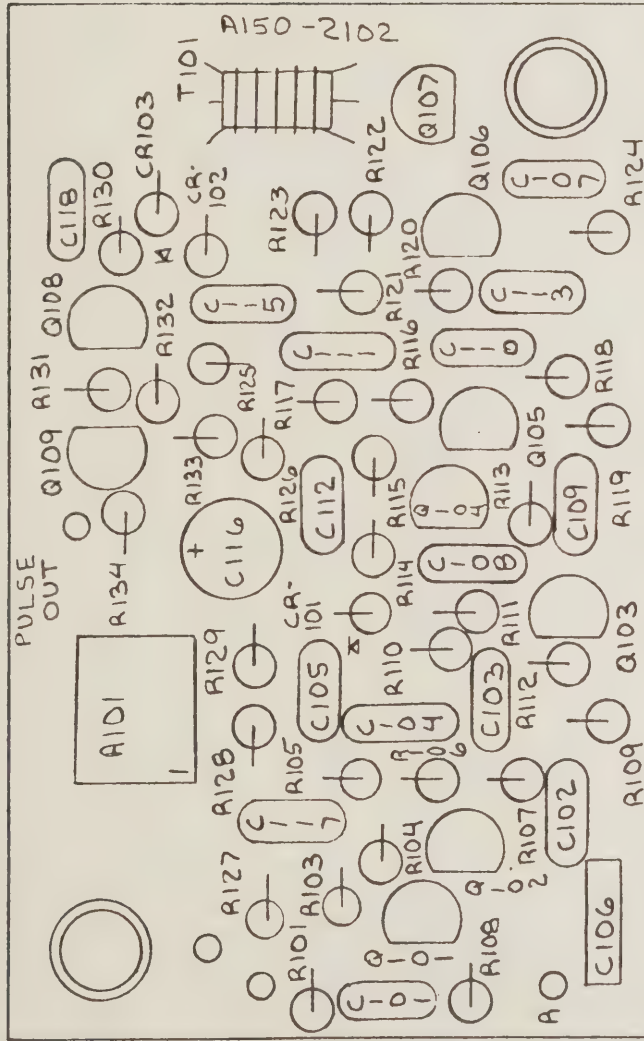
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SWR/WATTMETER BAD LAYOUT

1. COMPONENT DESIGNATORS (7700 SERIES)

DRAWING NUMBER

0800-2303



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DATE: 1-12-79		REVISED

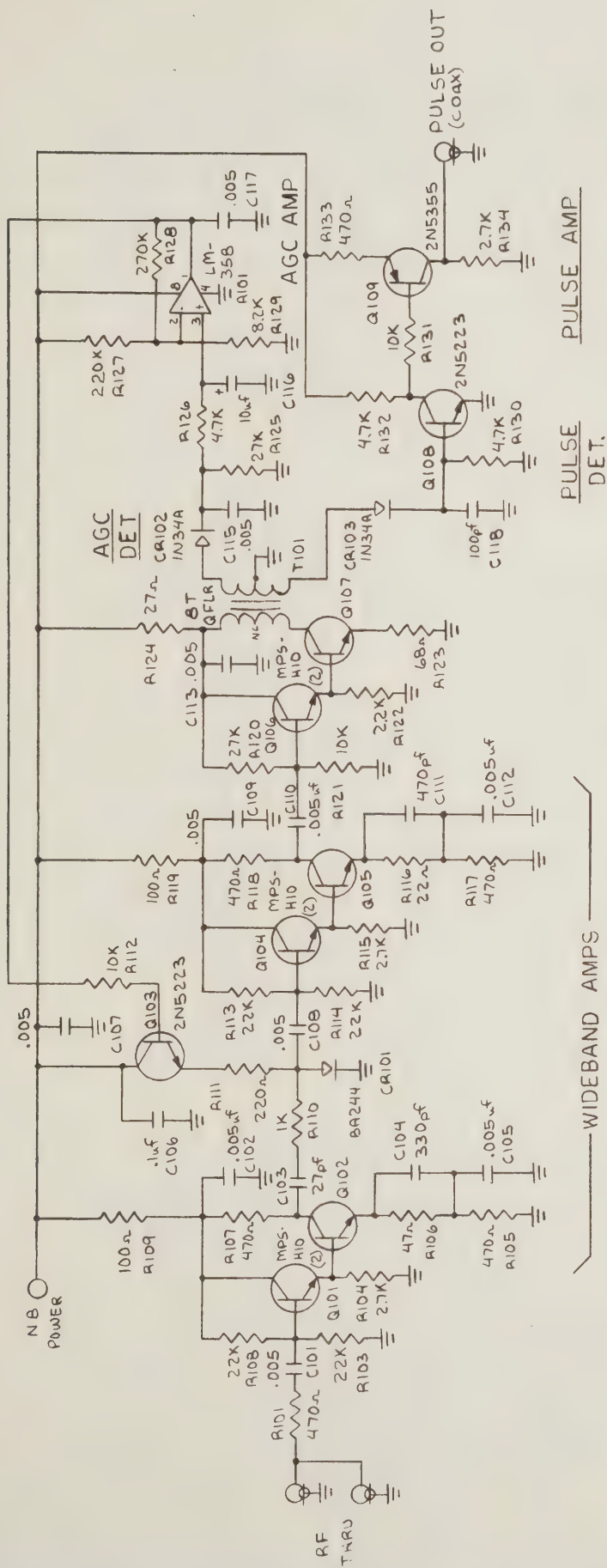
A150 NOISE BLANKER BRD LAYOUT

DRAWING NUMBER
0800-2304

PROJ.

0176

1. COMPONENT DESIGNATORS (7400 SERIES)
NOTES



SWAN ELECTRONICS

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SCALE: NONE
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NOISE BLANKER BRD SCHEMATIC

DRAWING NUMBER

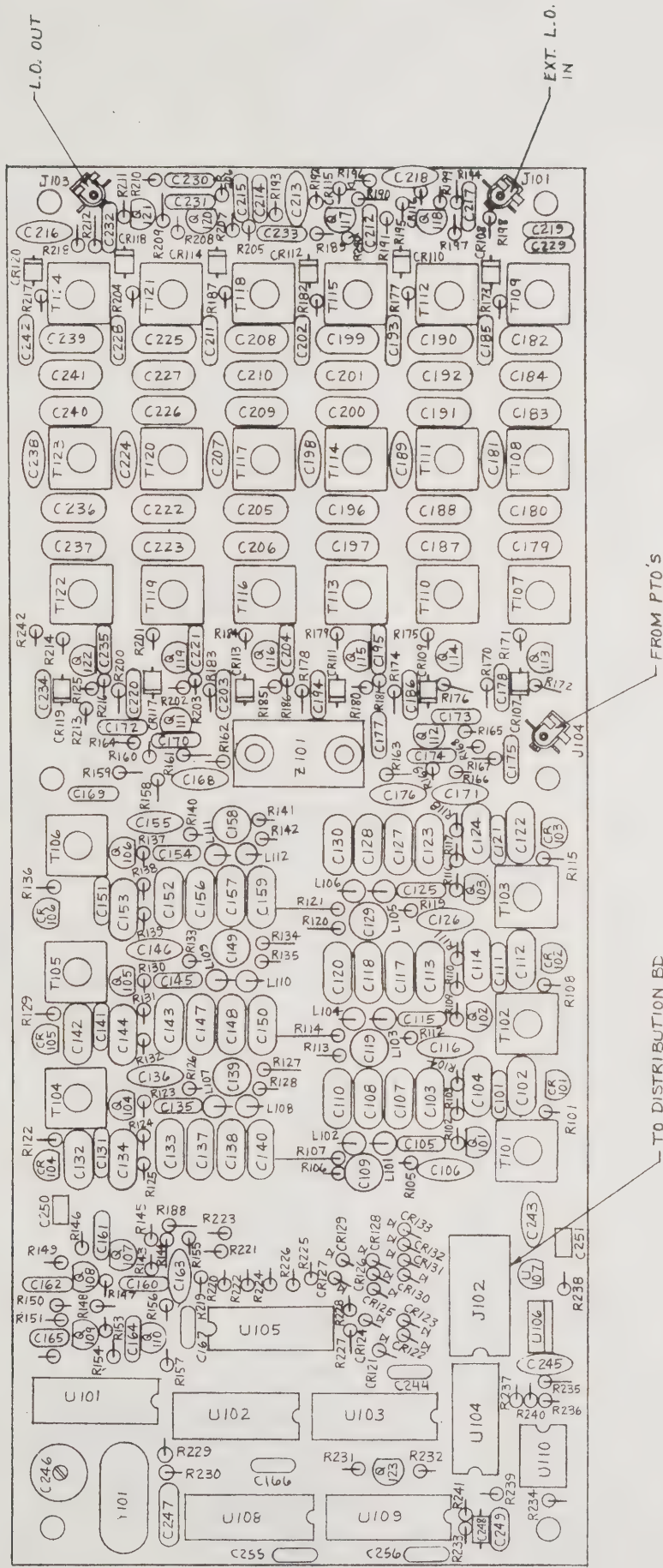
DRAWING NUMBER
0800-2404B

1. COMPONENT DESIGNATORS (7400 SERIES)

NOTES

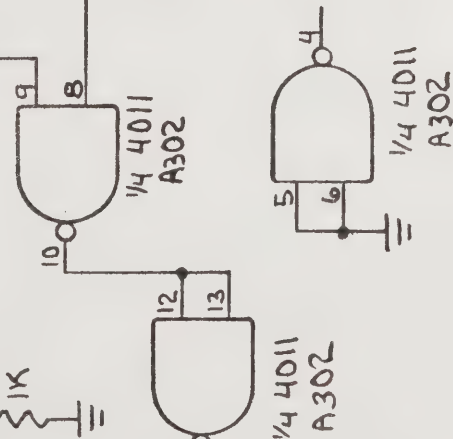
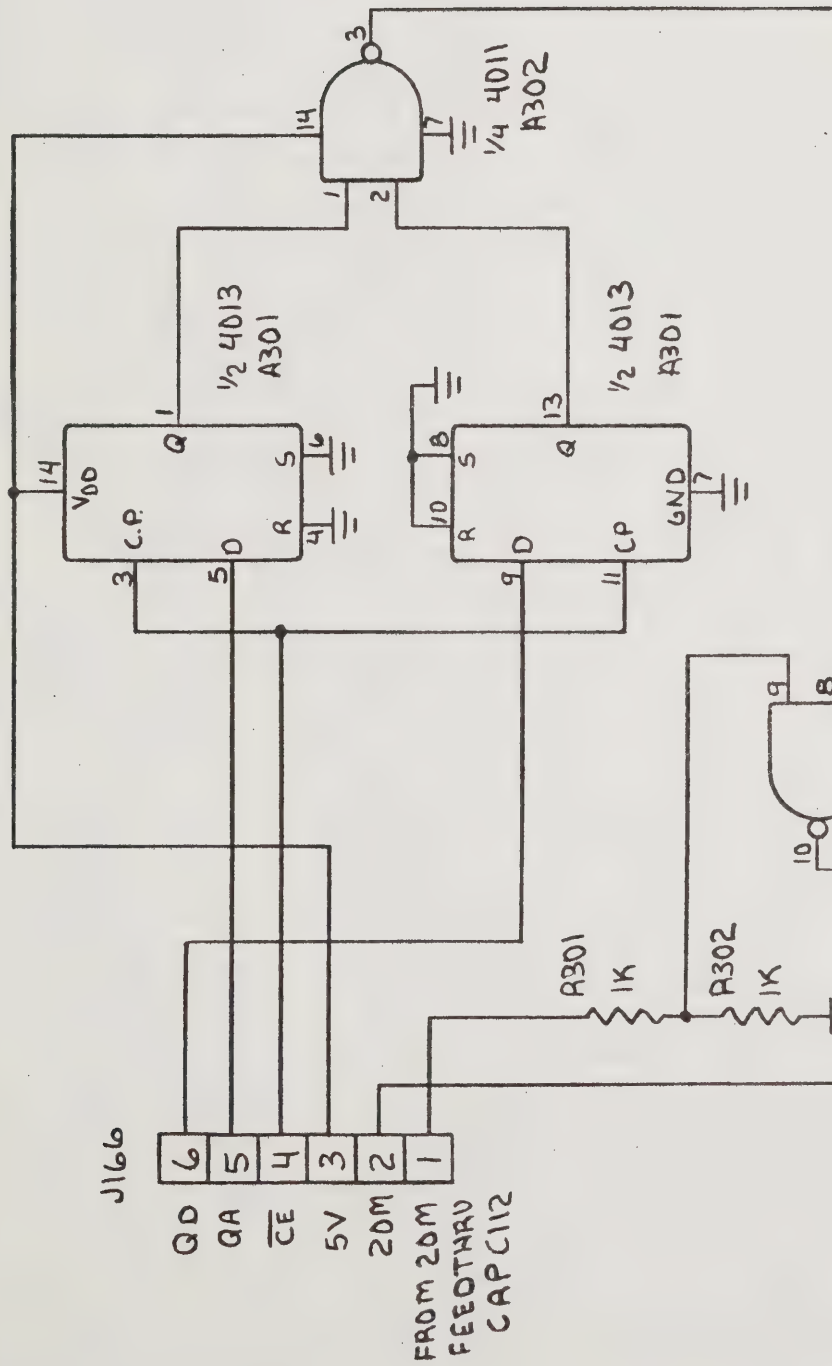
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A	ADD C255 C256 AND R240	11-16-90	154
B	CD 11-21-90		



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SCALE: NONE		L.O. BOARD COMPONENT LAYOUT FOR 102BX		
DRAWN BY: JWG		102BX-2304-1		

2. COMPONENT DESIGNATORS: 5000 SERIES
1. REF. ELECT. ASSY 102BX-2004
 REF. CIRCUIT BOARD 102BX-2104
 REF. DRILL DWG 102BX-2204
 NOTES.



CUBIC COMMUNICATIONS, INC.
305 AIRPORT ROAD • OCEANSIDE, CA 92054

SCALE: NONE	APPROVED BY: <i>C. H. Hall</i> <i>near 7-25-80</i>	DRAWN BY: DAVIDSON
DATE: 7-4-80		REVISED

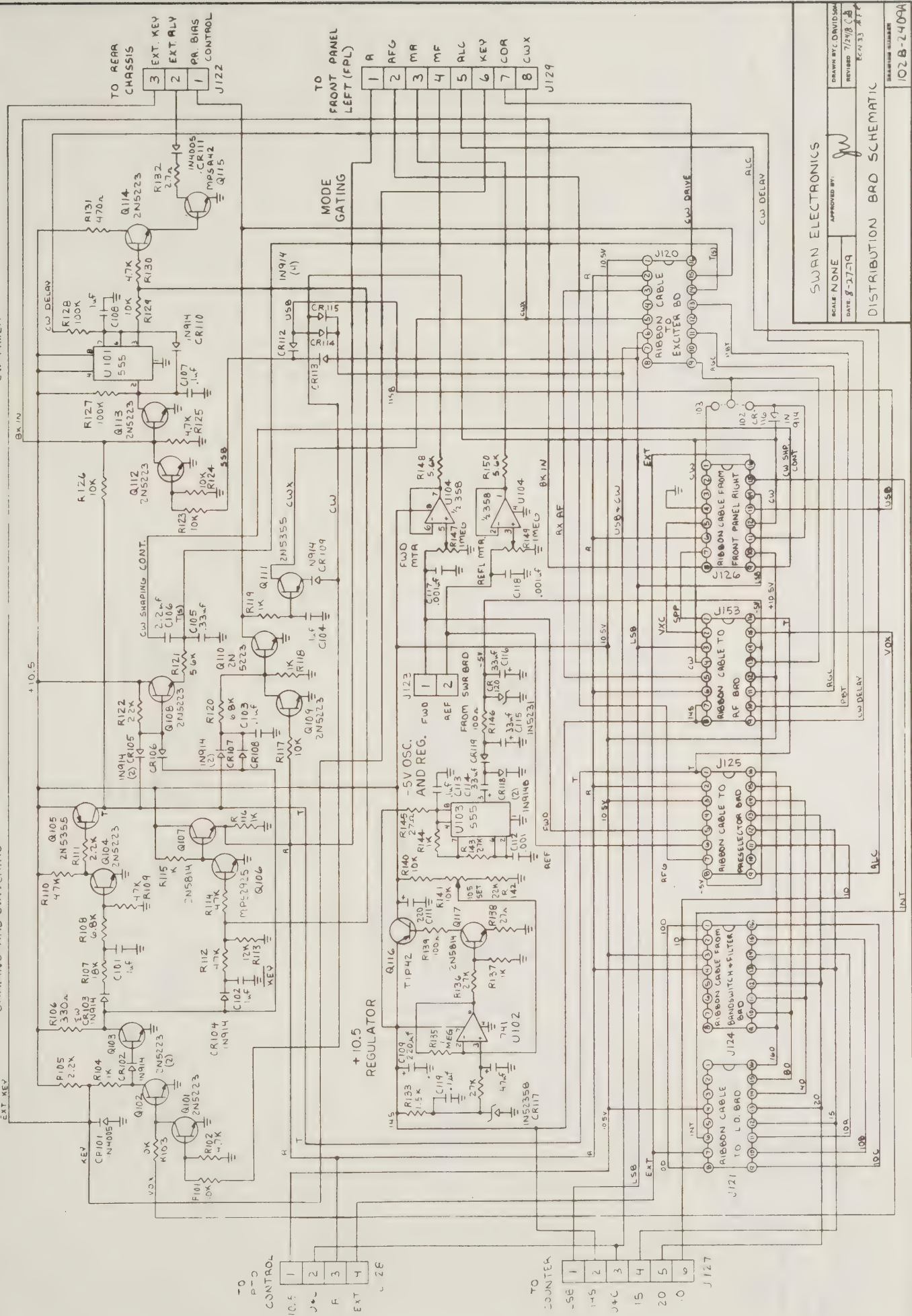
AUX. COUNTER BD SCHEMATIC

1. COMPONENT DESIGNATORS 8300 SERIES

DRAWING NUMBER
A103-2405

CONTROL VOLTAGE
SHAPING AND SWITCHING

CW TIMER



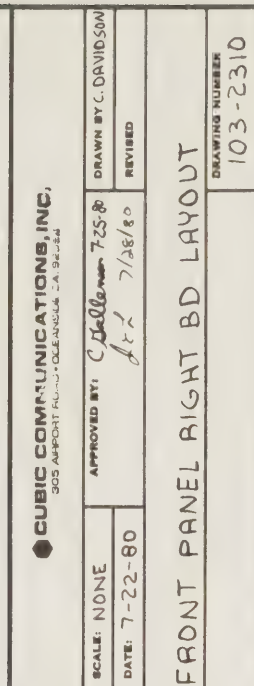
SWAN ELECTRONICS

SCALE NONE APPROVED BY: *gm*

DATE 8-27-79

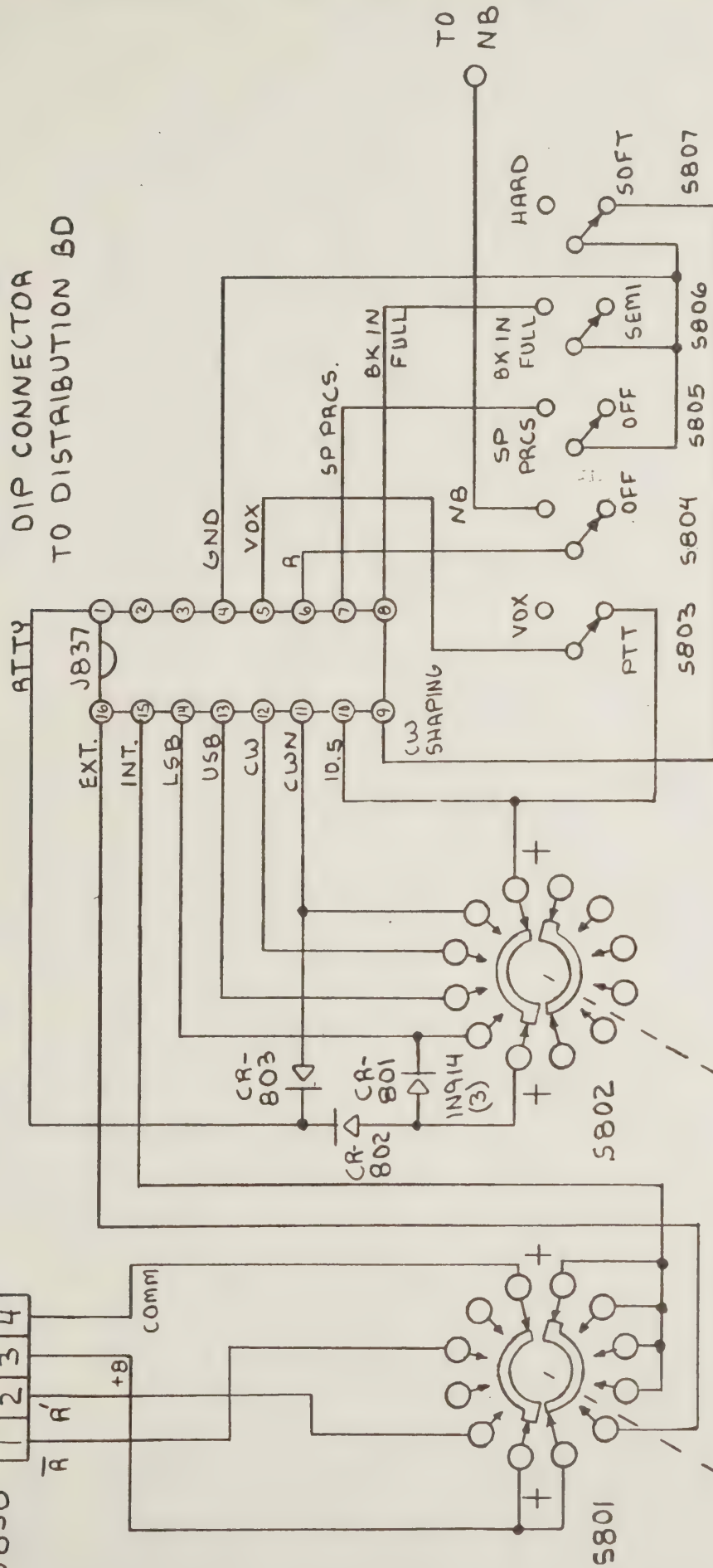
DISTRIBUTION BRD SCHEMATIC

102B-2409A



- NOTES

J838 TO PTO
CONTROL BD



CUBIC COMMUNICATIONS, INC.
305 AIRPORT ROAD • OCEANSIDE, CA. 92054

SCALE: NONE	APPROVED BY: <i>C. Hallen</i> 7-25-80	DRAWN BY C. DAVIDSON
DATE: 7-22-80	<i>DEL 7/28/80</i>	REVISED

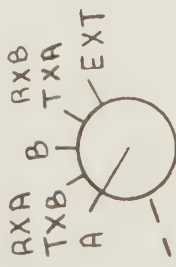
FRONT PANEL RIGHT BD 103

COMPONENT DESIGNATORS
(7800 SERIES)

DRAWING NUMBER

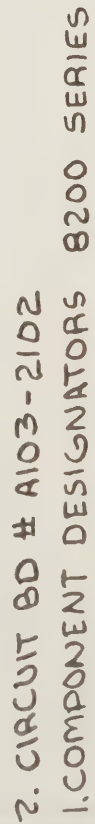
A103-2410

PTO MODE SW



MODE SW



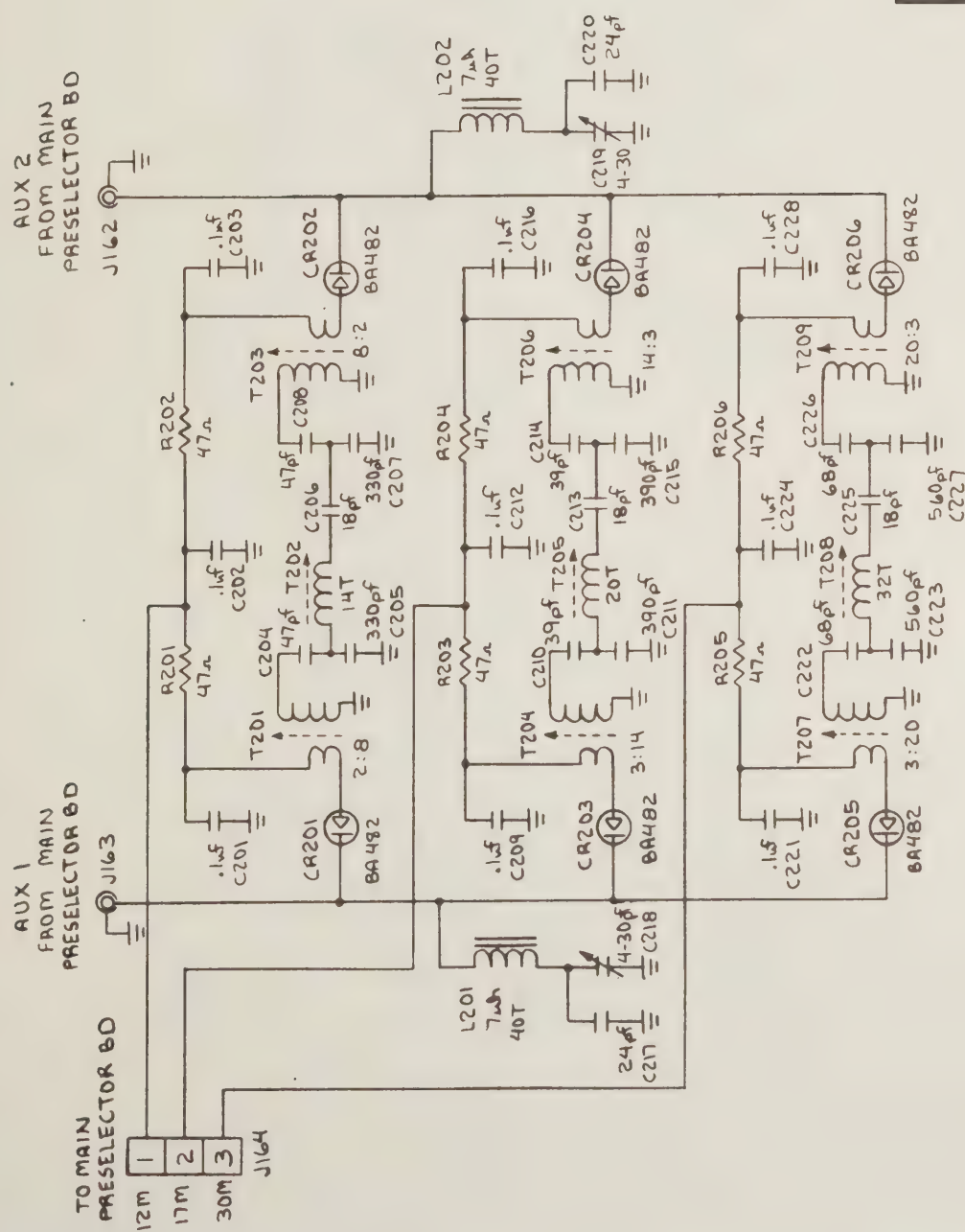


DRAWING NUMBER

A103-2302

SCALE: NONE	APPROVED BY: C. G. Sollen	DRAWN BY C. DAVIDSON
DATE: 7-22-80	7-25-80 JER 7/28/80	
		REVISED

AUX PRESELECTOR BD LAYOUT



CUBIC COMMUNICATIONS, INC.
305 AIRPORT ROAD • OCEANSIDE, CA. 92054

SCALE: NONE

RAWTH ST., DAY

DATE: 7-22-80

REVIEWS

AUX PRESELECTOR BD FOR ASTRO103

DRAWING NUMBER
A103-2402

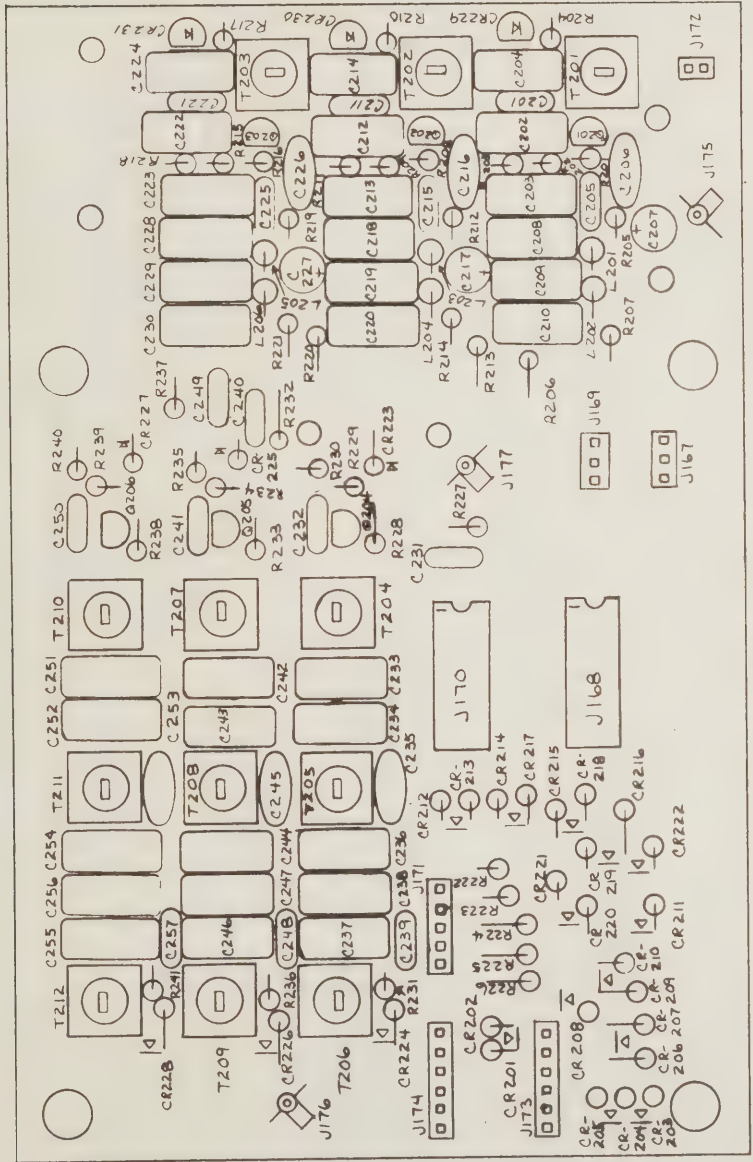
1.COMPONET DESIGNATORS B200 SERIES

NOTES

UNITED STATES DEPARTMENT OF AGRICULTURE

REV	DATE
A	1-1-81
B	4-22-81
C	4-22-81
D	4-22-81
E	4-22-81
F	4-22-81
G	4-22-81
H	4-22-81
I	4-22-81
J	4-22-81
K	4-22-81
L	4-22-81
M	4-22-81
N	4-22-81
O	4-22-81
P	4-22-81
Q	4-22-81
R	4-22-81
S	4-22-81
T	4-22-81
U	4-22-81
V	4-22-81
W	4-22-81
X	4-22-81
Y	4-22-81
Z	4-22-81

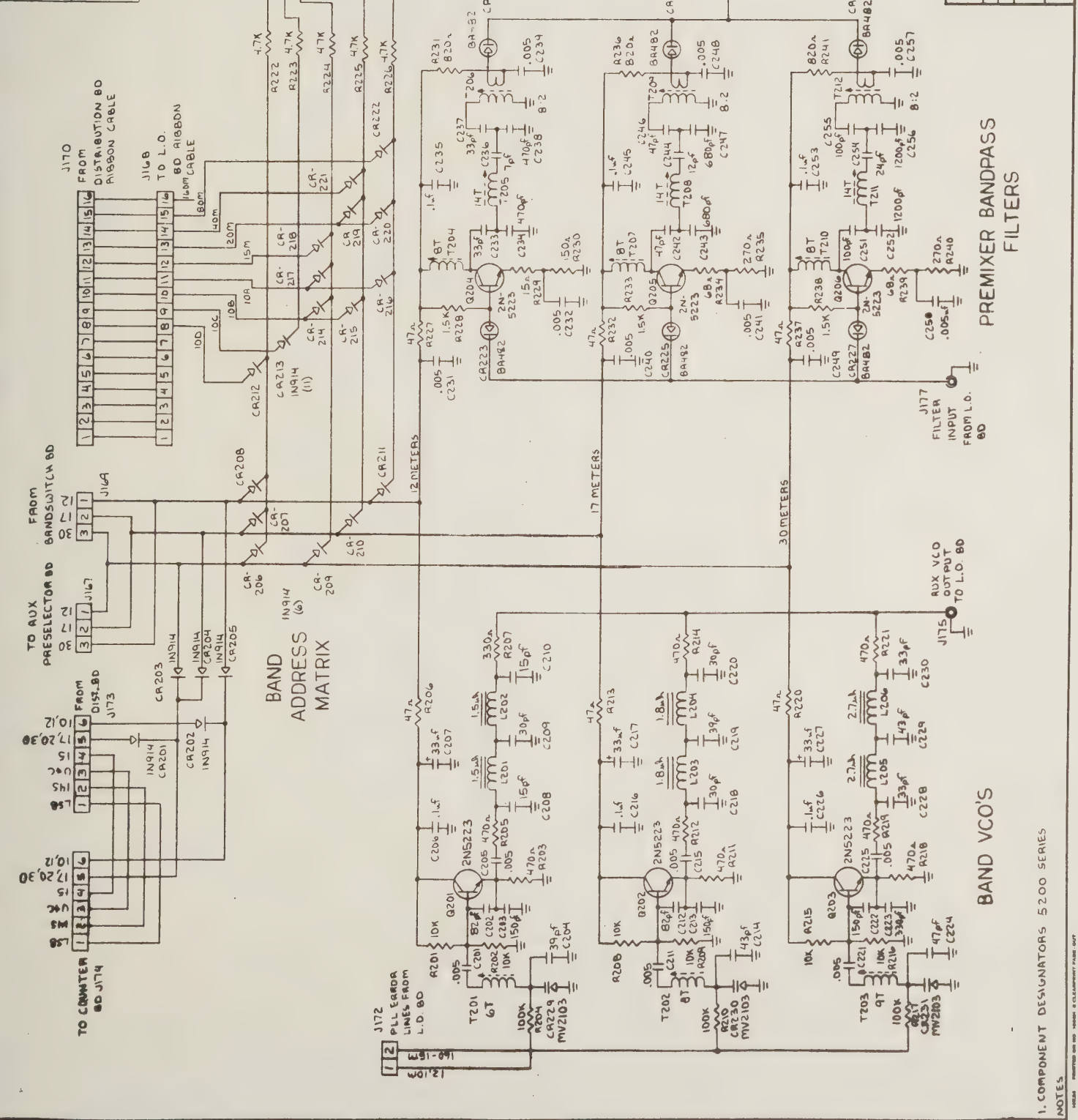
REVISED AND REDRAWN
A
MOVING VCO SECTION TO
ALLOW FOR CLEARANCE
60
HOLES TO L.O. BY CK 4-22-81



CUBIC COMMUNICATIONS, INC. 845 AVENUE 100, SUITE 100, CA 94024	
SCALE: 2:1	APPROVED BY: <i>C. K.</i>
DATE: 4-22-81	DRAWN BY: <i>C. K.</i>
REVISED	
AUX. L.O. BOARD LAYOUT DWG	
REV: A	DRAWING NUMBER: A103-2304

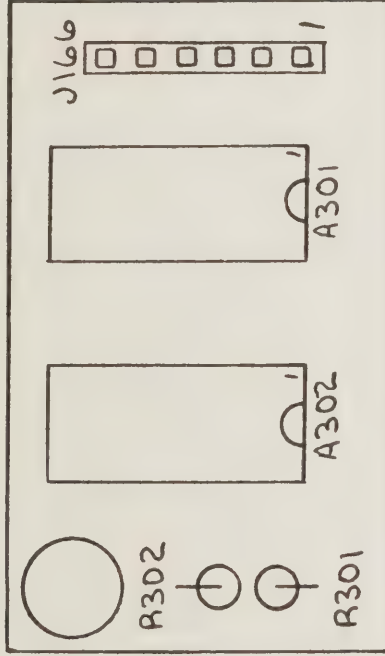
2 CIRCUIT 80 P.N. A103-2104
1. COMPONENT DESIGNATORS (5200 SERIES)
NOTES:
1/3 84 PRINTED ON 80% RECYCLED PAPER

REVISIONS		DATE	APPD
A	CHANGED C243 & C247 FROM 470pF TO 680pF	10/8/80	LAR
B	CHANGE C208 & C210 TO 15pF. CHANGE R229 68Ω TO 15Ω. CHANGE R230 270Ω TO 150Ω. CHANGE R207 470Ω TO 330Ω	11/1/80	LAR



CUBIC COMMUNICATIONS, INC. 300 AVENUE 1040, OLLA, CALIF. 94046		DATE BY: <i>DAVID</i>	DATE: <i>7/23/80</i>
APPROVED BY: <i>DAVID</i>		REV: <i>5</i>	103-2404
SCALE: NONE		AUX L.O. SCHEMATIC	
DATE: 7-23-80			

1. COMPONENT DESIGNATORS 5200 SERIES
NOTES



SCALE: NONE	APPROVED BY: <i>C. Hallen</i> 7-25-80	DRAWN BY C. DAVIDSON
DATE: 7-14-80	<i>DEL</i> 7/28/80	REVISED

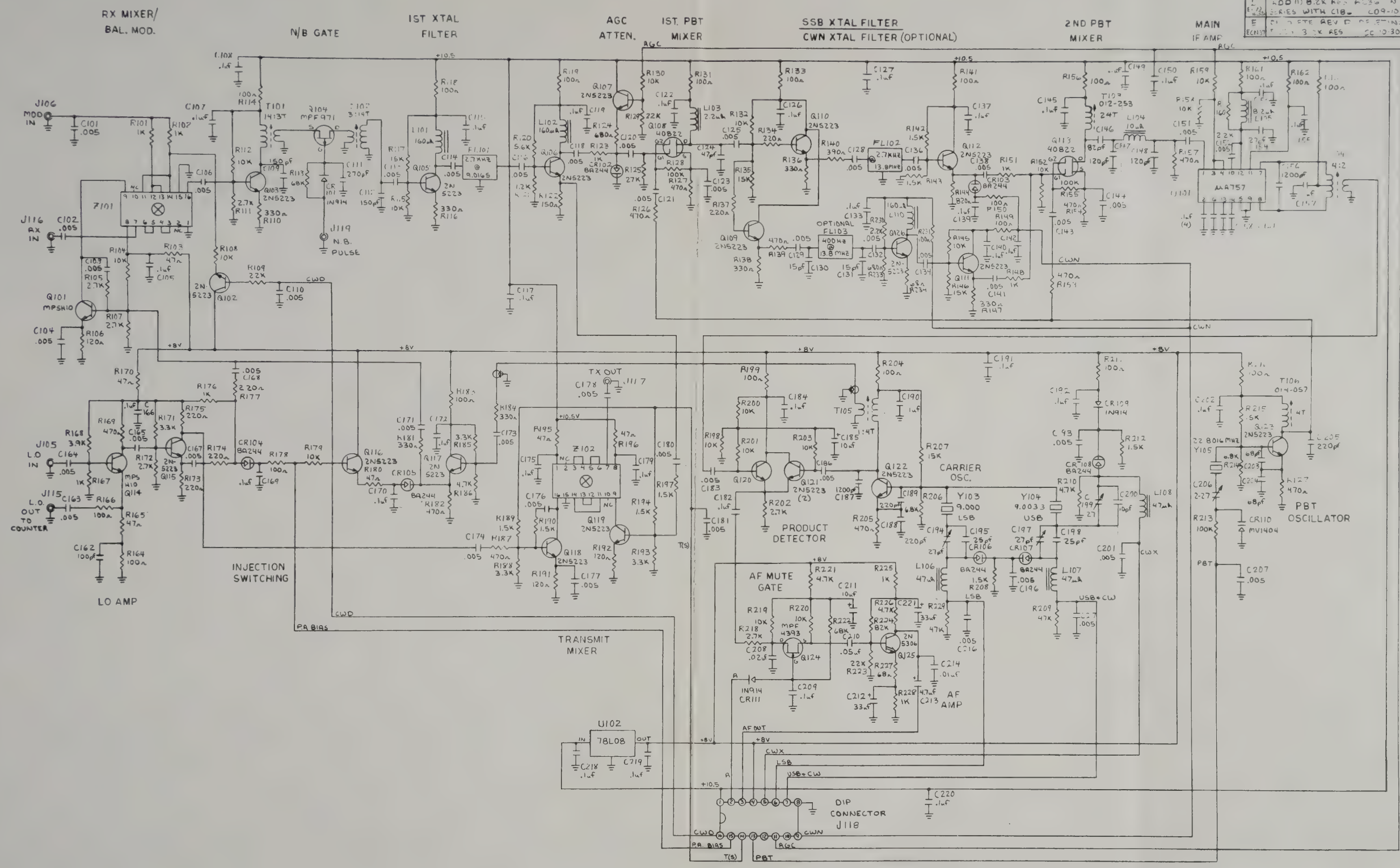
AUX COUNTER BD LAYOUT

1. COMPONENT DESIGNATOR 8300 SERIES

NOTES

DRAWING NUMBER
A103-2305

REVISIONS		DATE	APP'D
C	ADDED OPTIONAL C.W. NARROW BAND FILTER	07-11-80	DEF
C	ADDED 110.82K RES. TO C10	09-10-80	DEF
E	CHANGED C214 FROM .025 TO .015	11-16-80	DEF



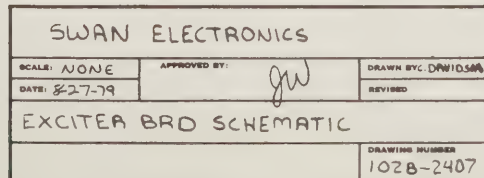
1. COMPONENT DESIGNATOR'S SERIES 2000.
NOTES:

CUBIC COMMUNICATIONS, INC.		305 AIRPORT BLVD. OAKLAND, CA 94612	
SCALE: NONE	APPROVED BY: <i>gw</i>	DRAWN BY: D10138	REVISED: C1113
DATE: 1-24-80	EXCITER BROAD SCHEMATIC		
REV: F	DRAWING NUMBER: 102B-2407		

to see 2nd
get the manual
reproduction?

(get book set you like)
etc

MAIN
IF AMP

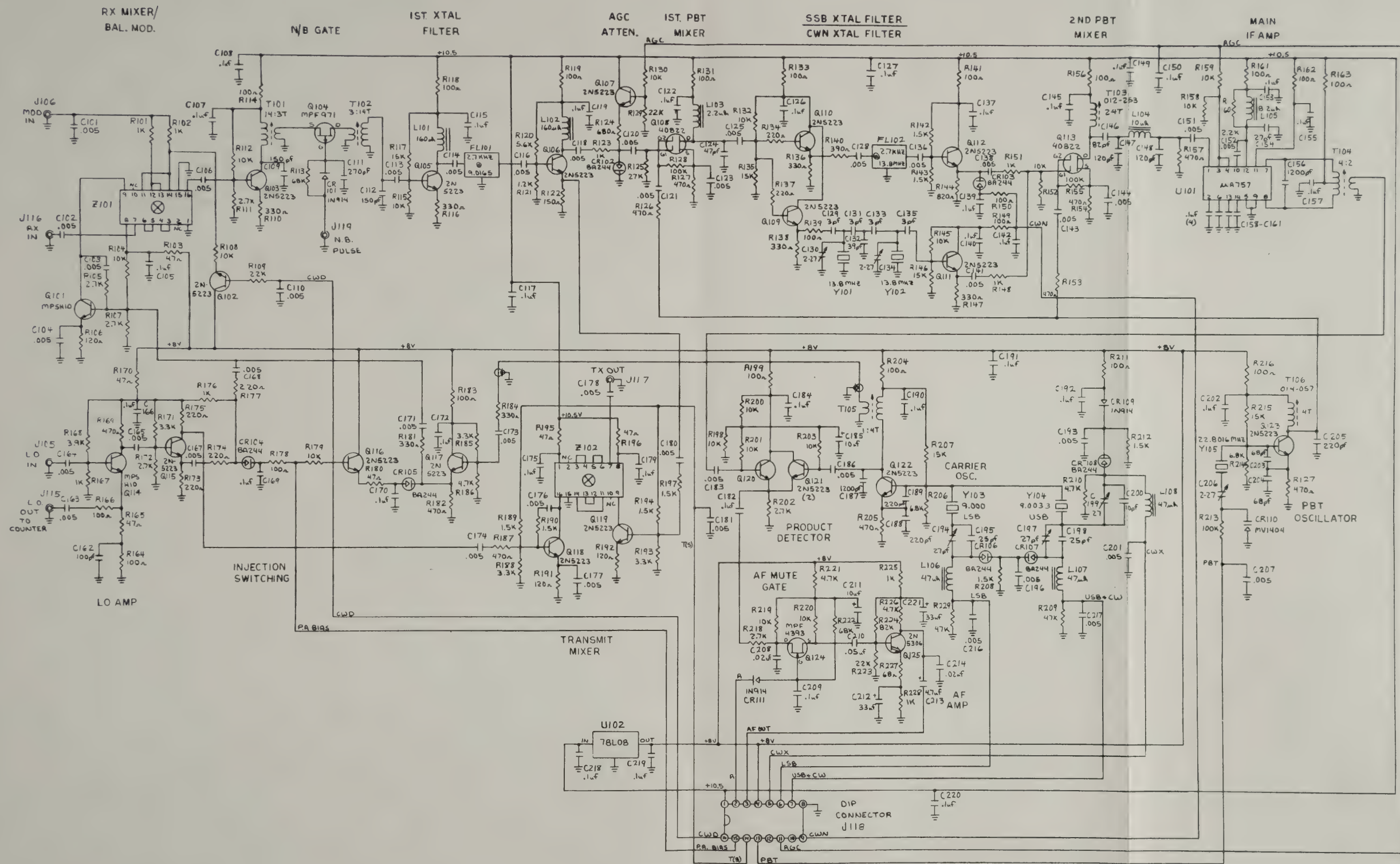


8-45

to see it is

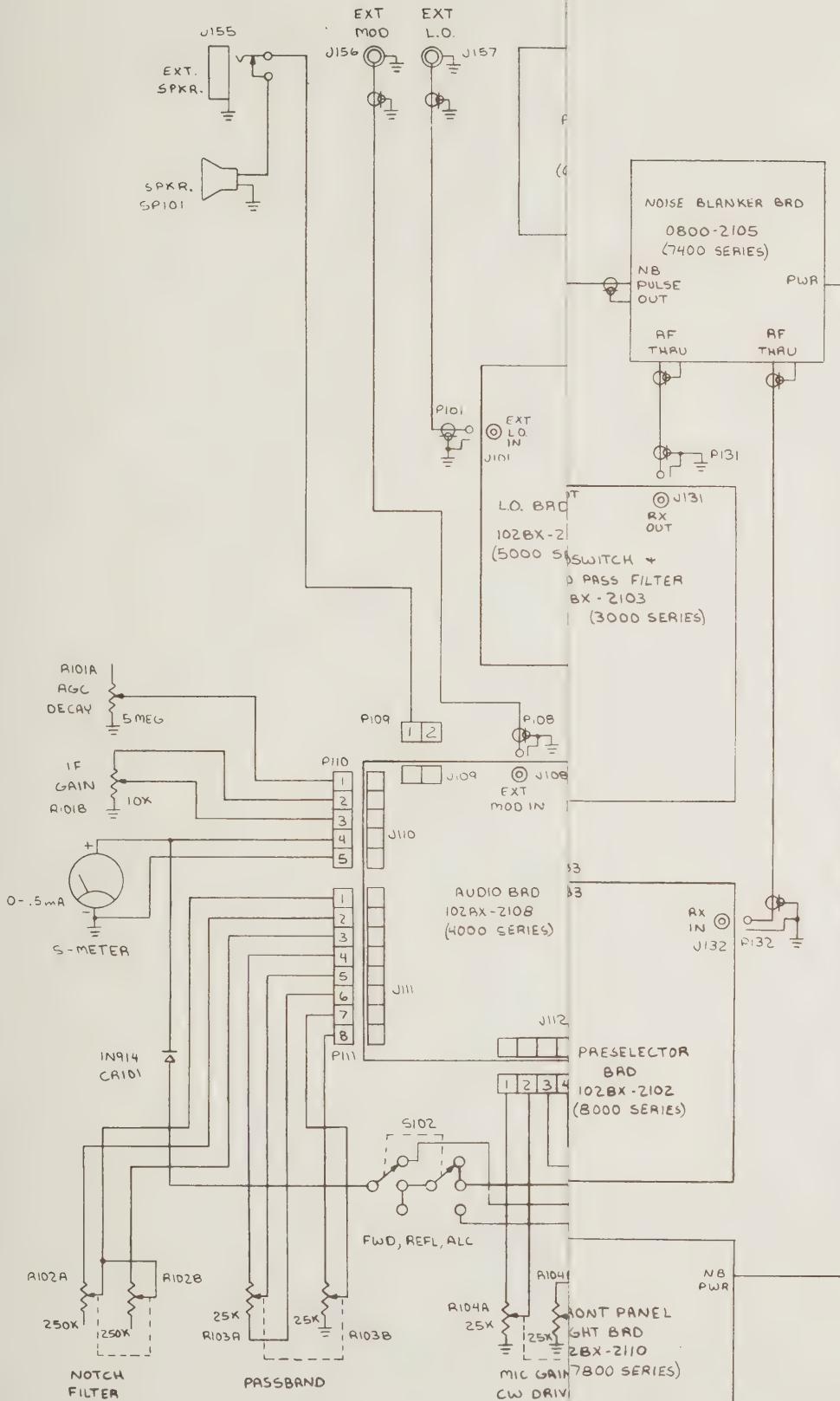
910 St. St. Avenue
Edmonton

(1917 1918. Set for 1918)



1. COMPONENT DESIGNATORS SERIES 2000.
NOTES:

SWAN ELECTRONICS		
SCALE: NONE	APPROVED BY: <i>gw</i>	DRAWN BY: D10135A
DATE: 8-27-79		REVISED:
EXCITER B70 SCHEMATIC		
DRAWING NUMBER		102B-2407



NOTES:

1. DENOTES MULTI CONDUCTOR CABLE ASSY, N = NUMBER OF CONDUCTORS
2. DENOTES 16 LEAD RIBBON CABLE WITH DIP PLUGS.
3. ALL COMPONENT DESIGNATORS CONSIST OF ONE OR TWO LETTERS FOLLOWED BY FOUR DIGITS. EXAMPLE: Q6101

Q
TRANSISTOR

6
PA
BRD

101
SEQUENTIAL
NUMBER

TRANSISTOR DATA BOTTOM VIEW: UNLESS OTHERWISE SPECIFIED

MPH10

78L08

2N3866

TIP42

MAF433
MAF458

2N5814

7805
78M05
78M08

40B22
3N211

MPS-A42
2N5223

2N5306

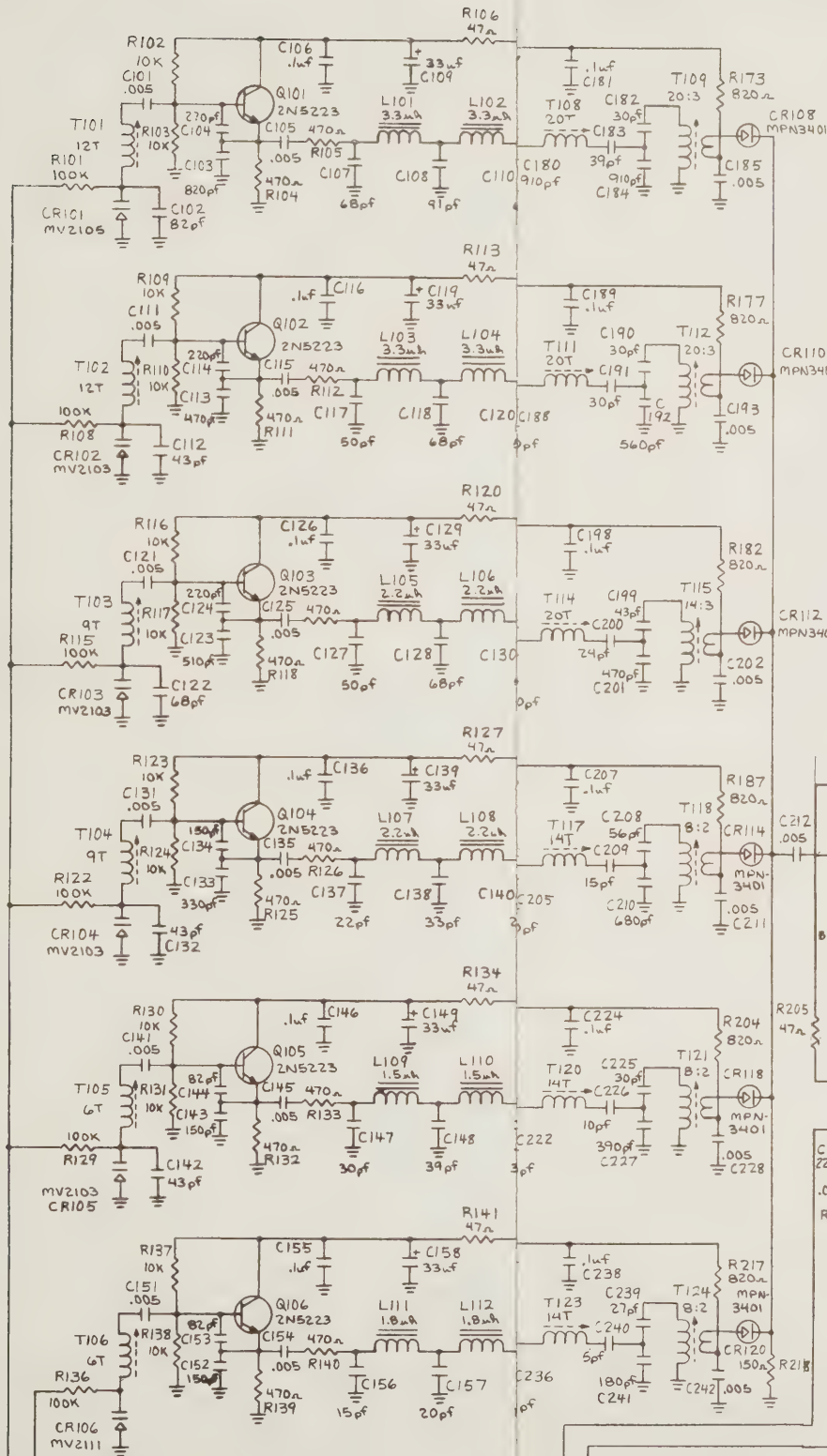
2N5355

MPF.971
MPF4393
2N5670

SWAN ELECTRONICS

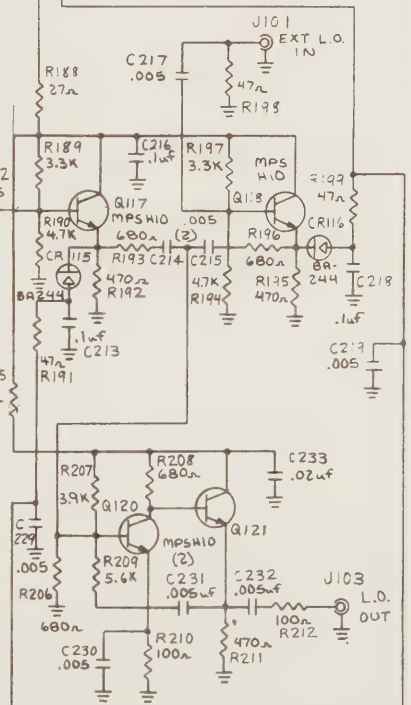
SCALE: NONE	APPROVED BY:	DRAWN BY: ORV:DSN
DATE: 7-13-79		REVISED
102BX MAIN CHASSIS + INTERCONNECT		
		DRAWING NUMBER 102BX-2801

BAND VCO'S



L.O. FREQUENCY	
BAND	MHZ
160	10.5 - 11.0
80	12.5 - 13.0
40	16.0 - 16.5
20	23.0 - 23.5
15	30.0 - 30.5
10A	37.0 - 37.5
10B	37.5 - 38.0
10C	38.0 - 38.5
10D	38.5 - 39.0

EXT./INT. SWITCH



OUTPUT AMP.

SWAN ELECTRONICS

SCALE: NONE APPROVED BY: *[Signature]* DRAWN BY: DAVIDSON

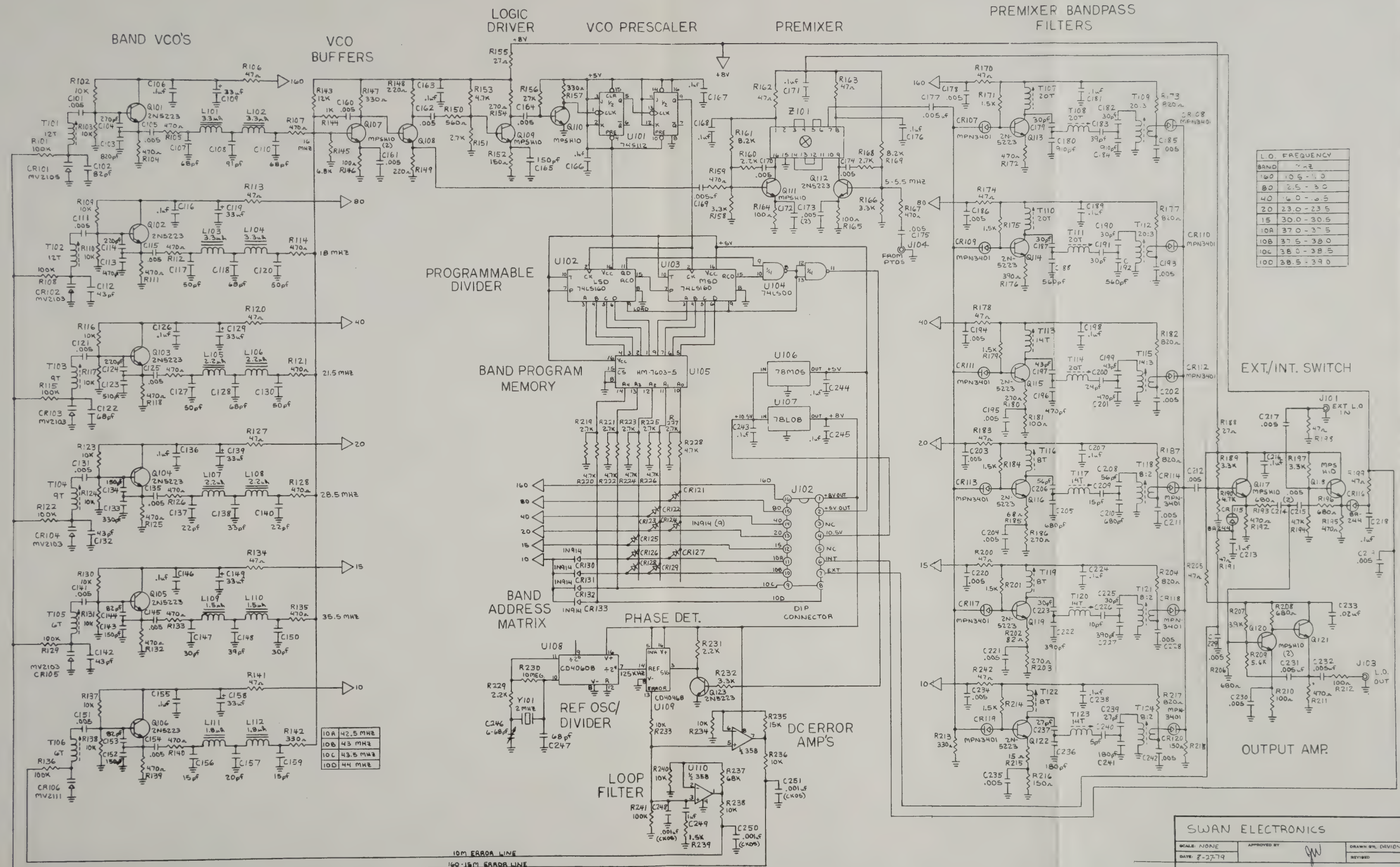
DATE: 8-27-79 REVISED

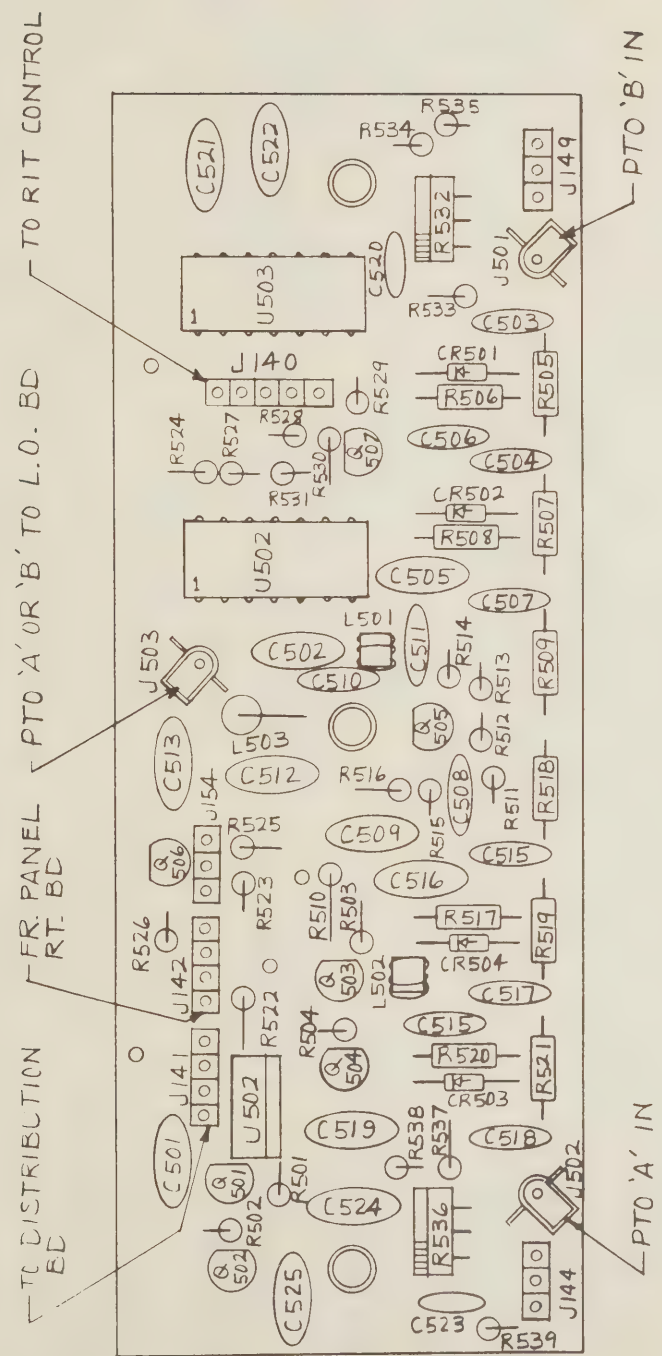
PROJ L.O. BND. SCHEMATIC

0177

DRAWING NUMBER 1028-2404

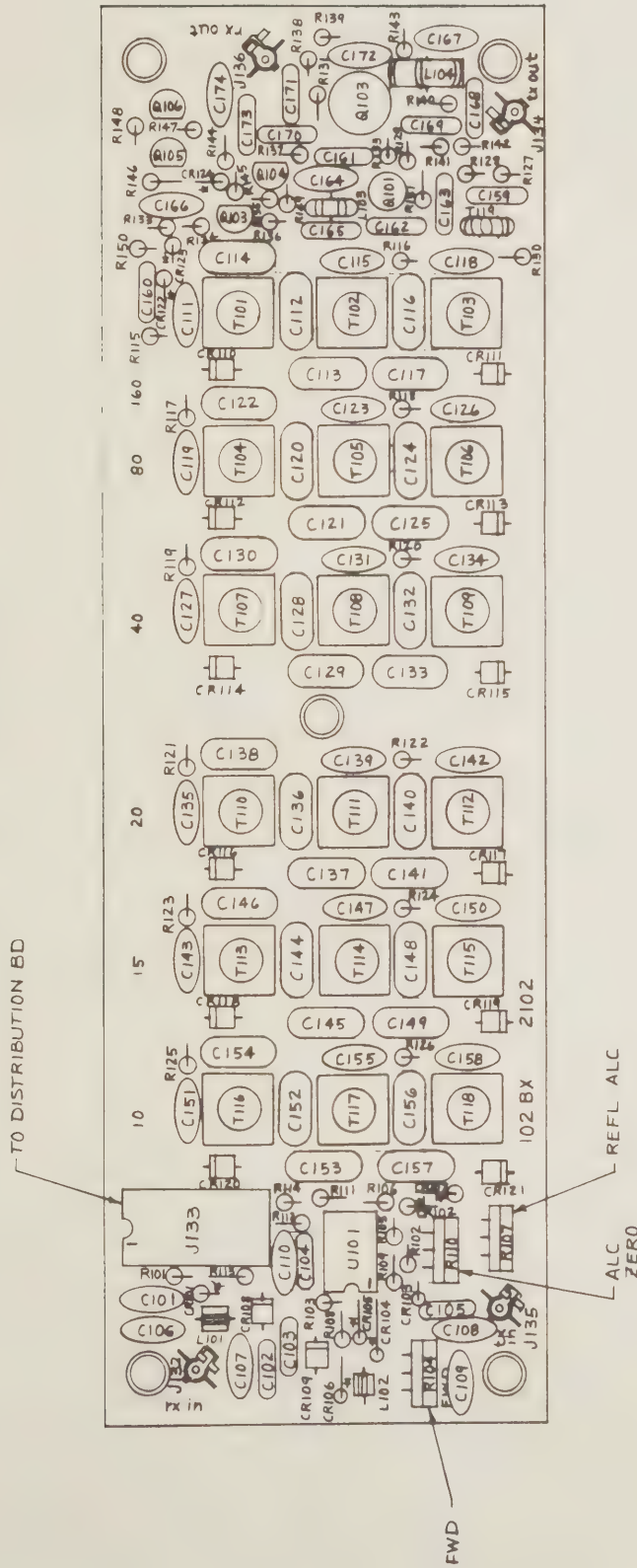
BAND 000.





SWAN ELECTRONICS		APPROVED BY: <i>gn</i>		DRAWN BY <i>AJG</i>
SCALE: ~	DATE: 9-18-79	REVISED		
PTO CONTROL BOARD LAYOUT				
DRAWING NUMBER				102EX-2301

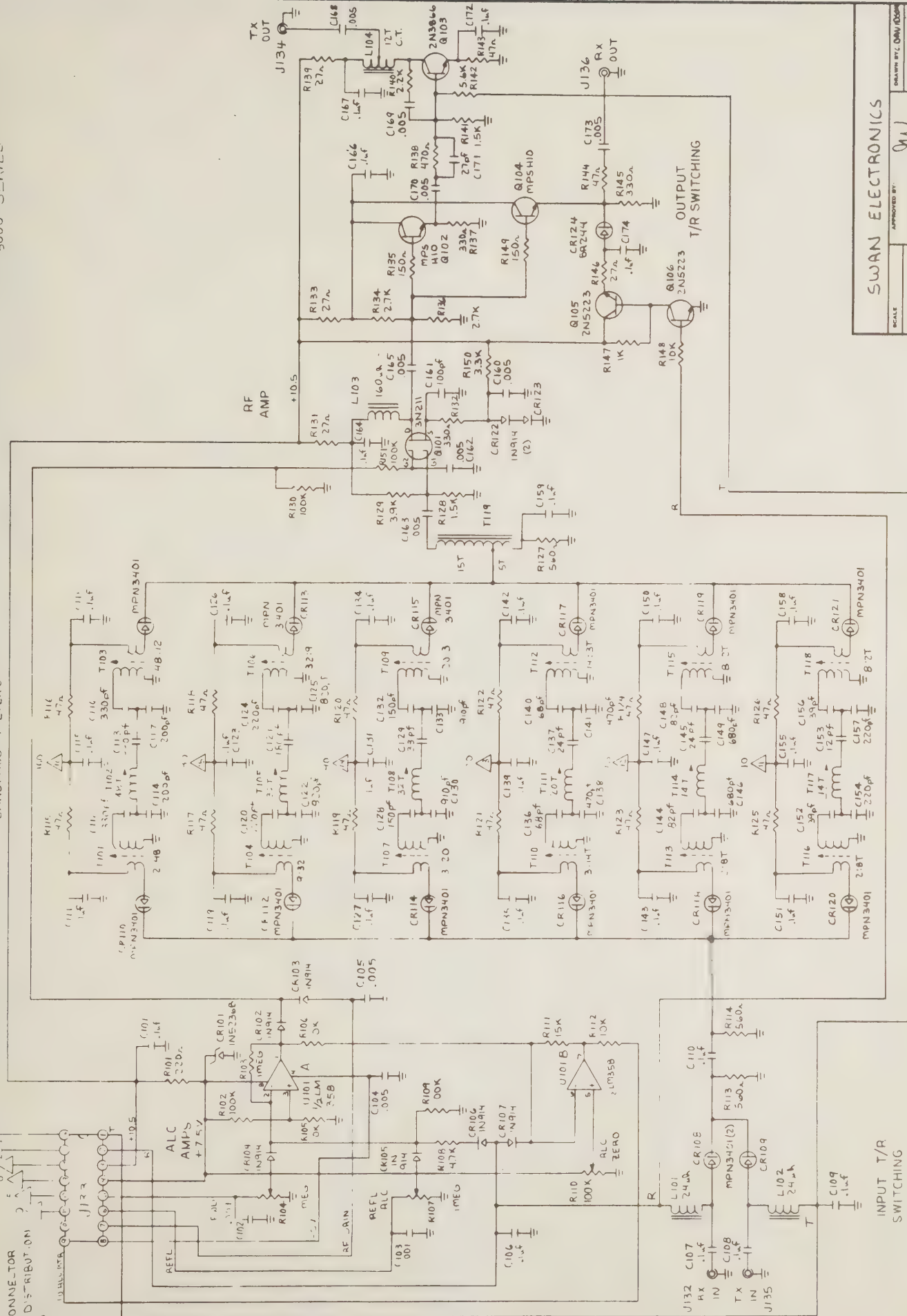
2. COMPONENT DESIGNATORS: 7500 SERIES
 1. REF. ELEC. ASSY 102BX-2001
 REF CIRCUIT BD 102BX-2101
 REF DRILL DWG 102BX-2201
 NOTES:




2. COMPONENT DESIGNATION SERIES 8000 -
1. REF. ELECT ASSY 102 BX-2002
 - REF. CIRCUIT BD 102 BX-2102
 - REF. DRILL DWG 102 BX-2202
- NOTES:

SWAN ELECTRONICS			
SCALE	DATE	APPROVED BY	DRAWN BY
NONE	7-24-79	JW	AJG
PRESELECTOR BOARD LAYOUT			
REV	REVISION NUMBER		
	102 BX-2302		

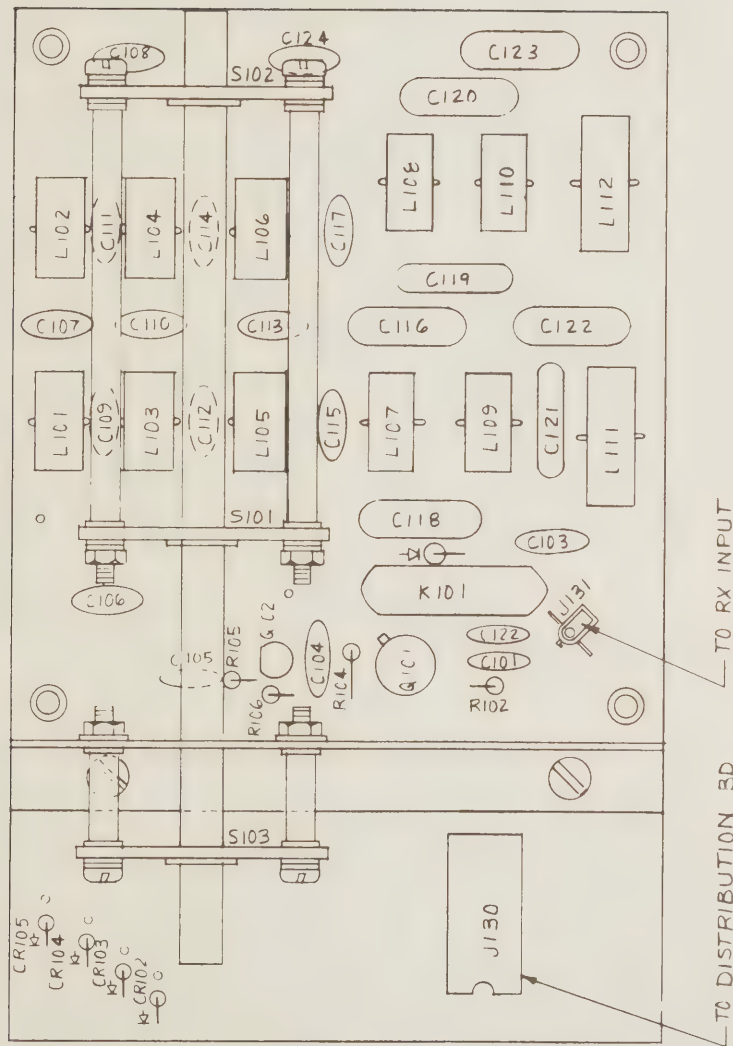
Bandpass Filters

[illegible]

SCALE	APPROVED BY:		DRAWN BY: ONLY DESIGN
DATE			REVISED

PAESELECTOR BAD 102BX

2042-8201
DRAWING NUMBER



SWAN ELECTRONICS

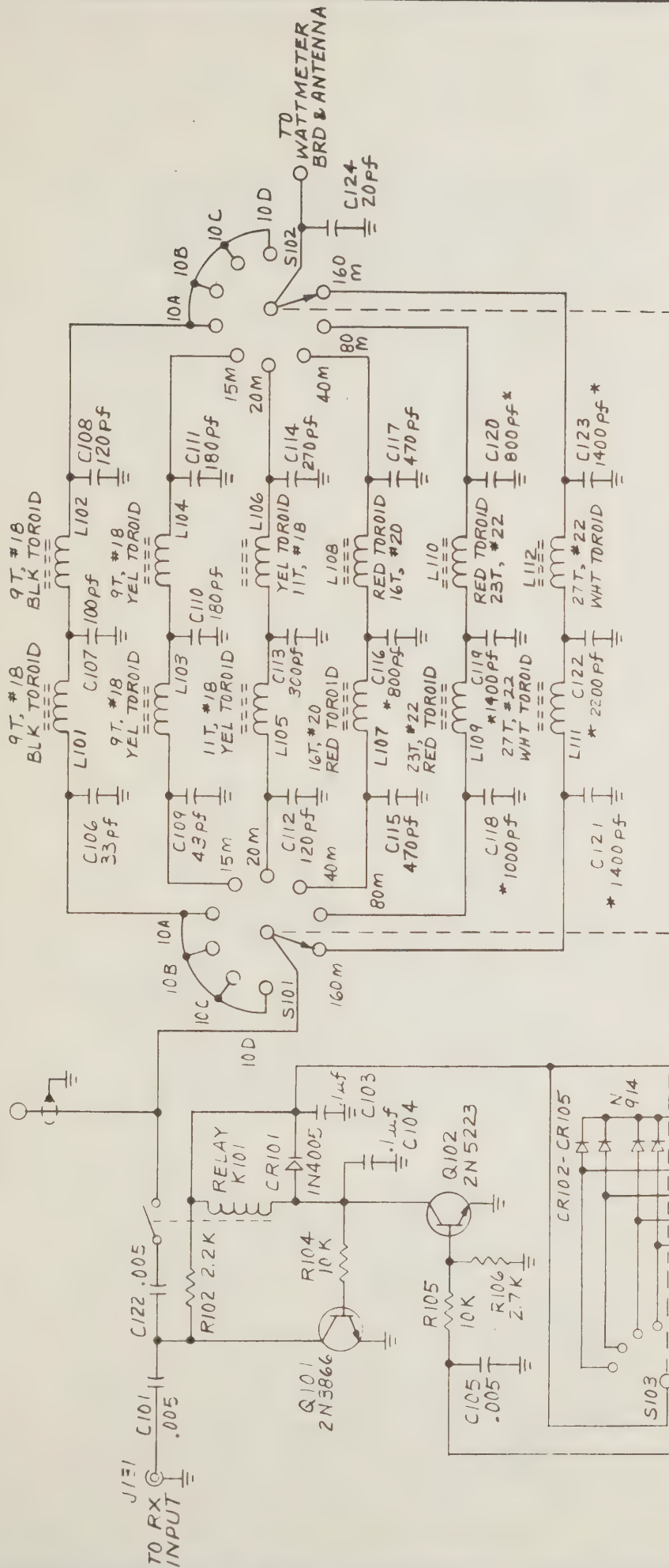
SCALE: ~
DATE: 9-18-74
APPROVED BY: *gwg*
DRAWN BY: AJG
REVISED

B/SWITCH & L.P. FILT BD LAYOUT

QUANTITY: 102BX-2303

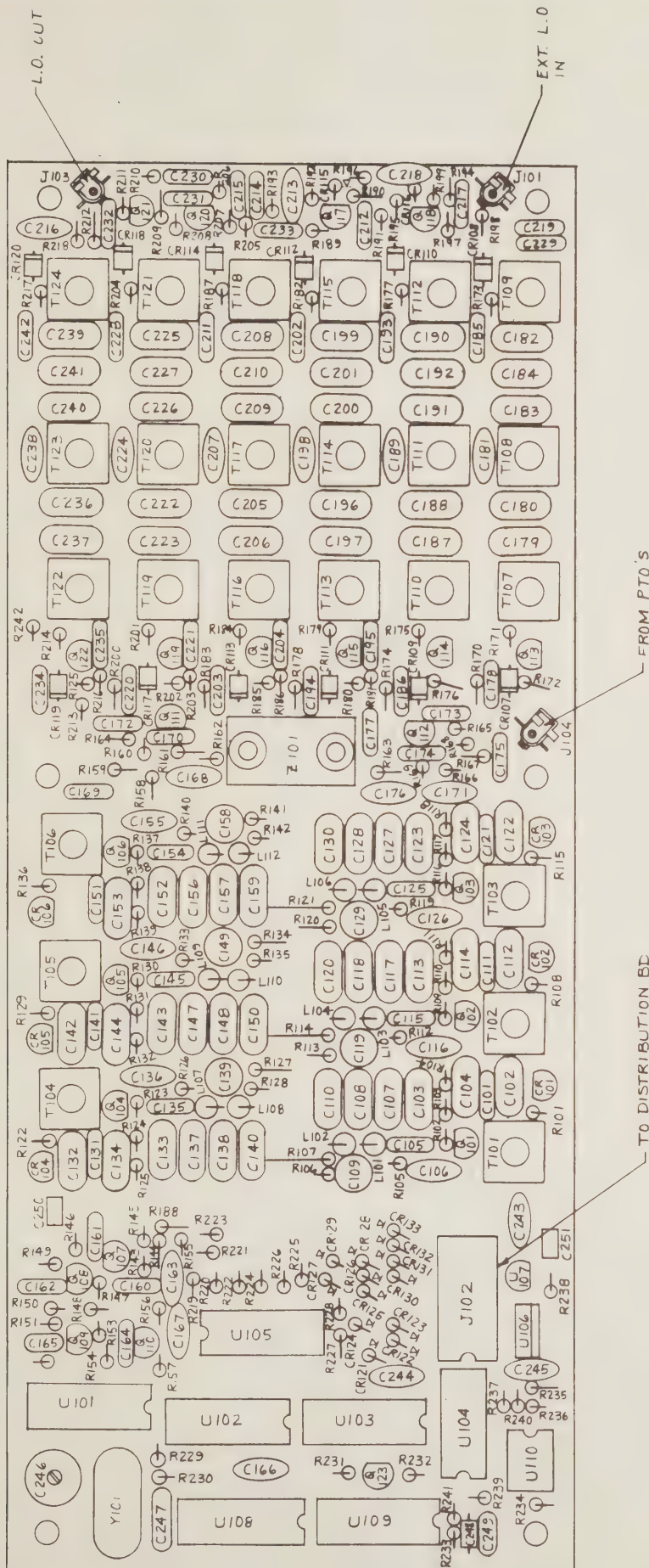
2. COMPONENT DESIGNATORS 3000 SERIES.
1. REF ELEC ASSY 102BX-2003
REF CIRCUIT BD 102BX-2103
REF. DRILL DWG 102BX-2203
NOTES:

FROM P.A.




SWAN ELECTRONICS	
SCALE: ~	APPROVED BY: <i>gn</i>
DATE: 5-22-79	REVISED
LOW PASS FILTER / BAND BRD SCHEMATIC	
102 BX	REV 102 BX-2403

2. COMPONENT DESIGNATION
 SERIES 3000
 1. * CM06 PACKAGE
 NOTES:



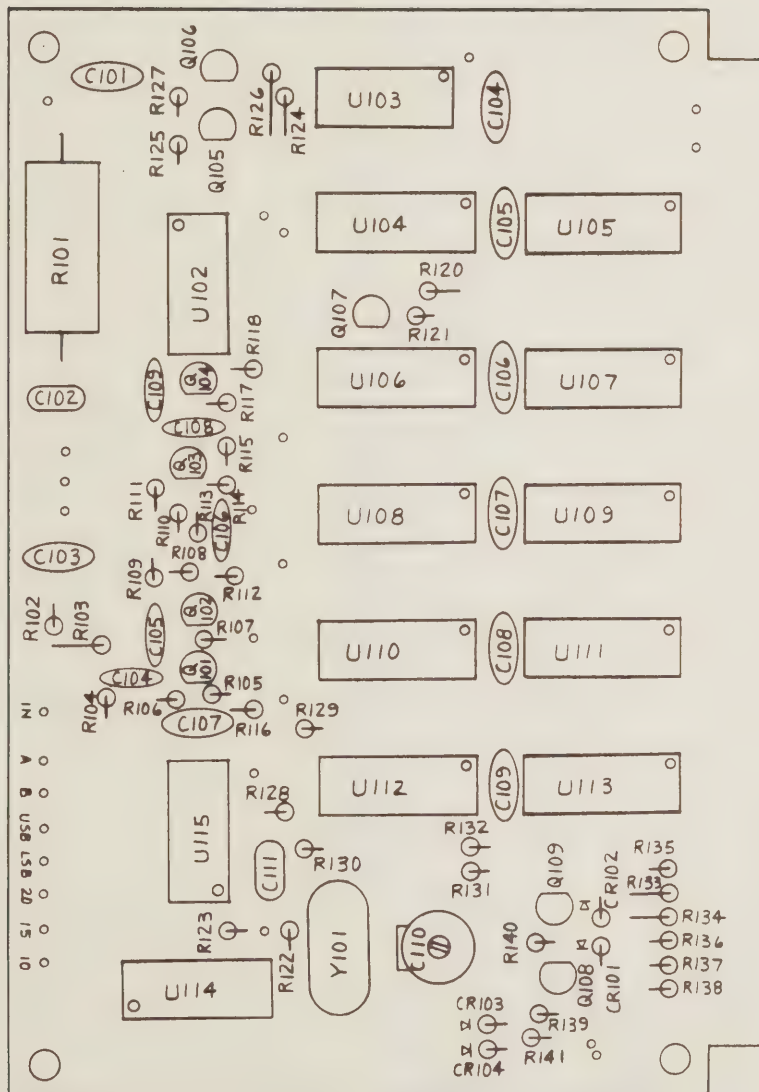
SWAN ELECTRONICS

SCALE	NONE	APPROVED BY		DRAWN BY	AJG
DAYS	7-30-79			REV	1000

L.O. BOARD COMPONENT LAYOUT

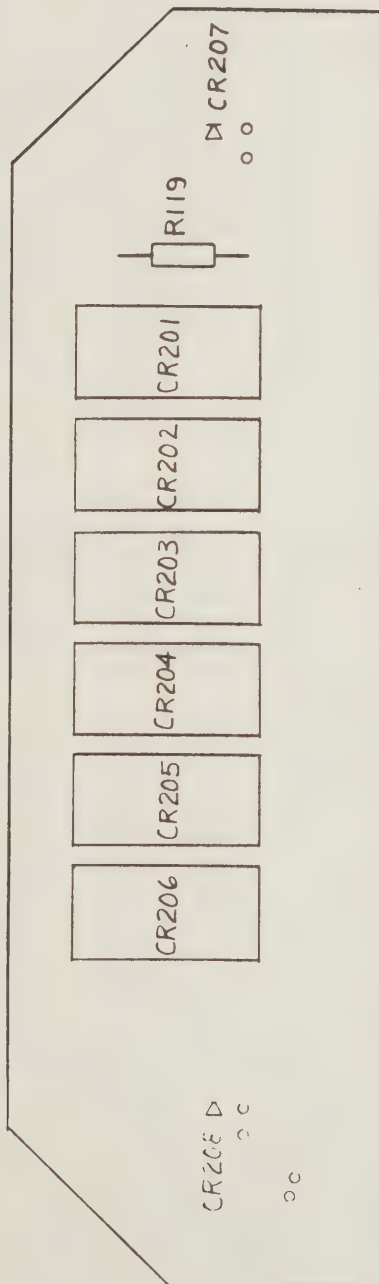
2. COMPONENT DESIGNATORS: 5000 SERIES

1. REF. ELECT ASSY 102BX-2004
REF. CIRCUIT BOARD 102BX-2104
REF. DRILL DWG 102BX-2204
NOTES.



SWAN ELECTRONICS		DESIGNED BY	DATE	REVISED BY	REVISED DATE
		~	9-19-74	~	
		COUNTER BOARD LAYOUT			
		102BX-2305			

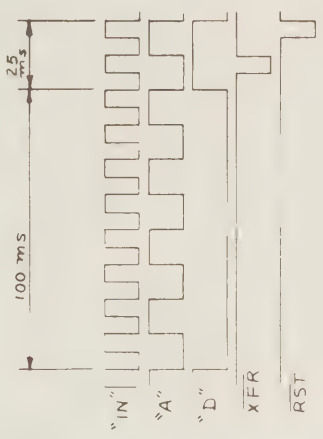
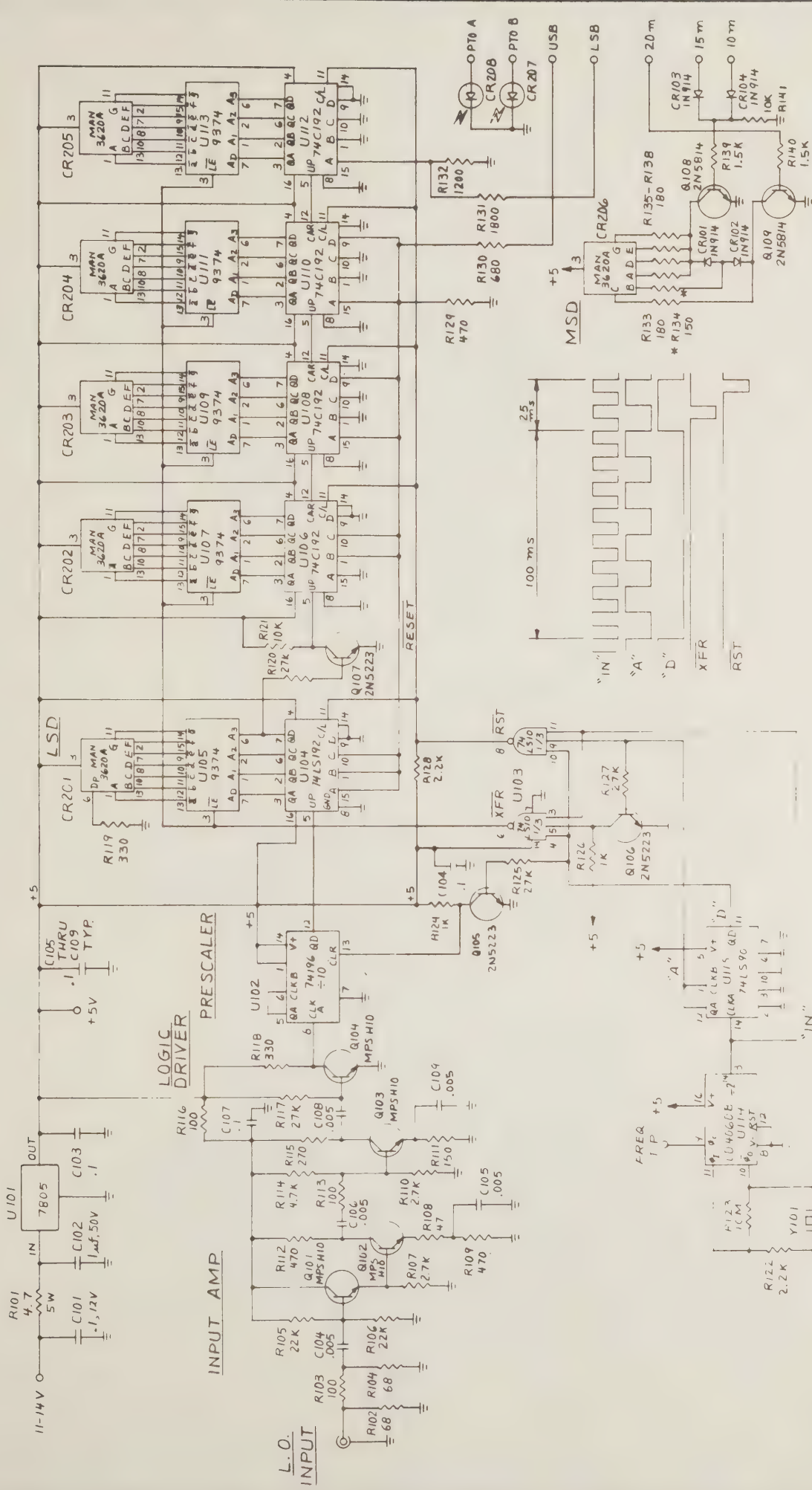
2. COMPONENT DESIGNATORS 7100 SERIES
 1. REF. ELEC. ASSY 102BX-2005
 REF. CIRCUIT BD 102BX 2105
 REF. DRILL DWG 102BX 2205
 NOTES:



2- COMPONENT DESIGNATOR SERIES 7200
 1. REF. ELECT. ASSY 102BX-2006
 REF. CIRCUIT BD 102BX-2106
 REF. DRILL DWG 102BX-2206
 NOTES:

SWAN ELECTRONICS

SCALE: ~	APPROVED BY: JW	DRAWN BY: AJG
DATE: 9-19-79		REVISED
DISPLAY BOARD LAYOUT		
		DRAWING NUMBER 102BX-2306

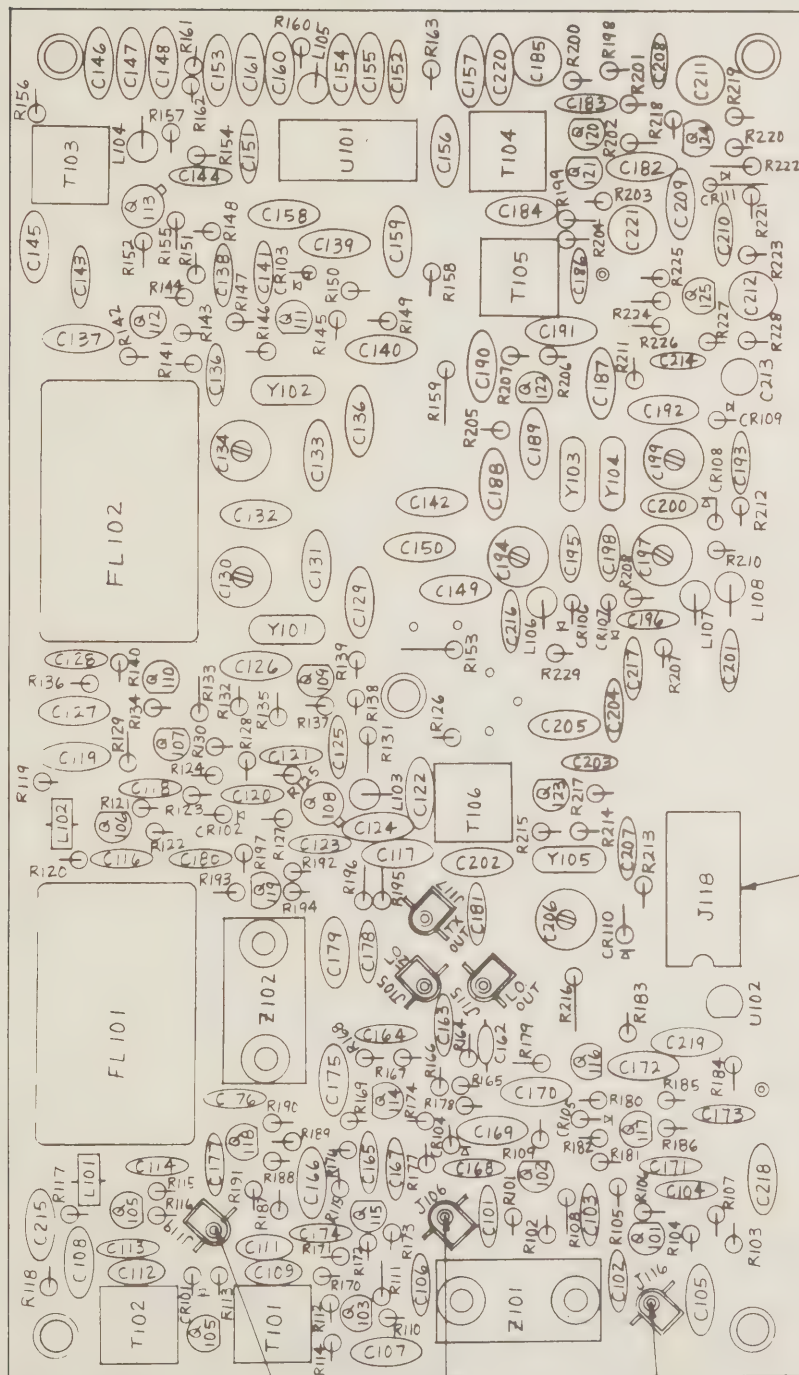


CONTROL LOGIC

REF OSC/DIVIDER

- 4. DISPLAY REF DESIGNATOR SERIES 7200
- 1. COUNTER REF DESIGNATOR SERIES 7100
- NOTES

SWAN ELECTRONICS	
SCALE NONE	APPROVED BY JN
DATE 6-8-79	DESIGNED BY AJG
COUNTER / DISPLAY BD SCHEMATIC	
102 BX	
REV 102BX-2405	REVISION NUMBER



2. COMPONENT DESIGNATORS 2000 SERIES .

1.	REF. ELECT. ASSY	102 BX-2007
	REF. CIRCUIT BOARD	102 BX-2107
	REF. DRILL DWG	102 BX-2204

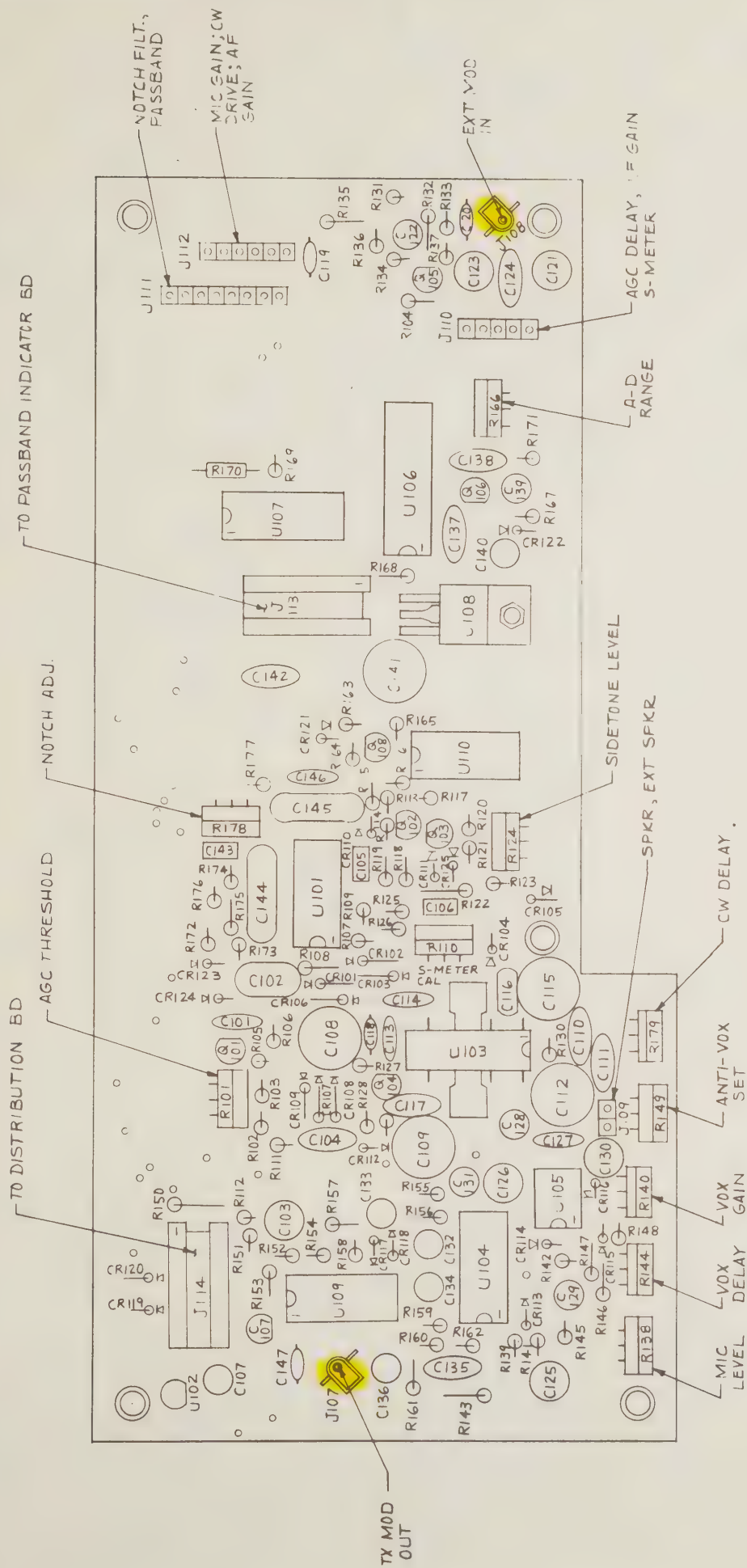
NOTES:

SWAN ELECTRONICS

SCALE: NONE	APPROVED BY: <i>gw</i>	DESIGNED BY: AJG
DATE: 9-24-79		REVISED

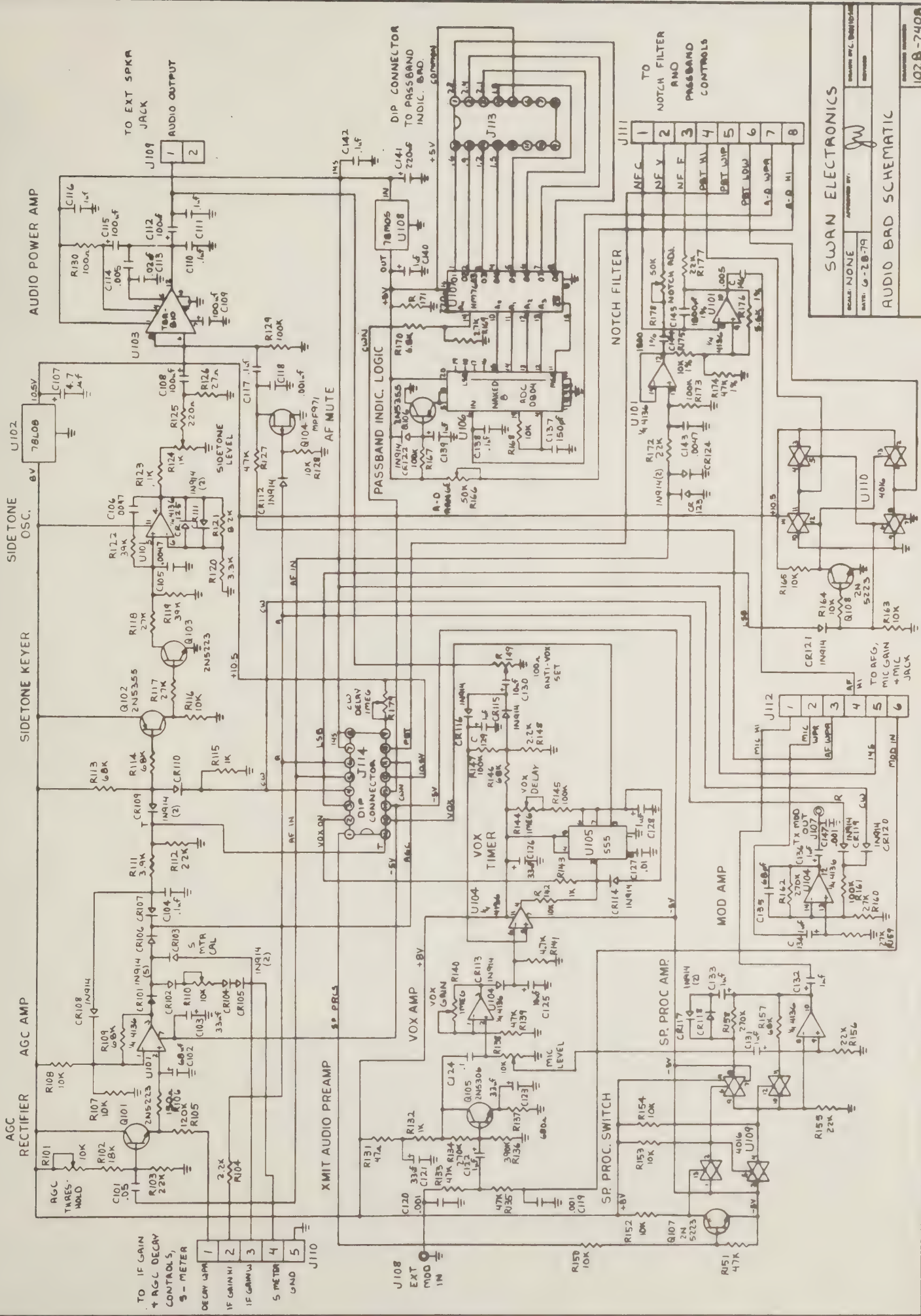
EXCITER BOARD LAYOUT

ORDER NUMBER: 102BX-2307



SWAN ELECTRONICS	
SCALE: NONE	APPROVED BY: <i>SW</i>
DATE:	REVISED
AUDIO BOARD LAYOUT	
DRAWING NUMBER: 102BX-2308	

2. COMPONENT DESIGNATORS 4000 SERIES -
 1. REF. ELECT. ASSY 102BX-2008
 REF. CIRCUIT BOARD 102BX-2108
 REF. DRILL DWG 102BX-2208
 NOTES:



SWAN ELECTRONICS
 SCALE NONE
 DATE: 6-28-79
 AUDIO BAD SCHEMATIC
 102B-2408



1. REF. ELECT. ASSY 102BX-2009
REF. CIRCUIT BD 102BX-2109
REF. DRILL DWG 102BX-2209

NOTES:

[illegible]

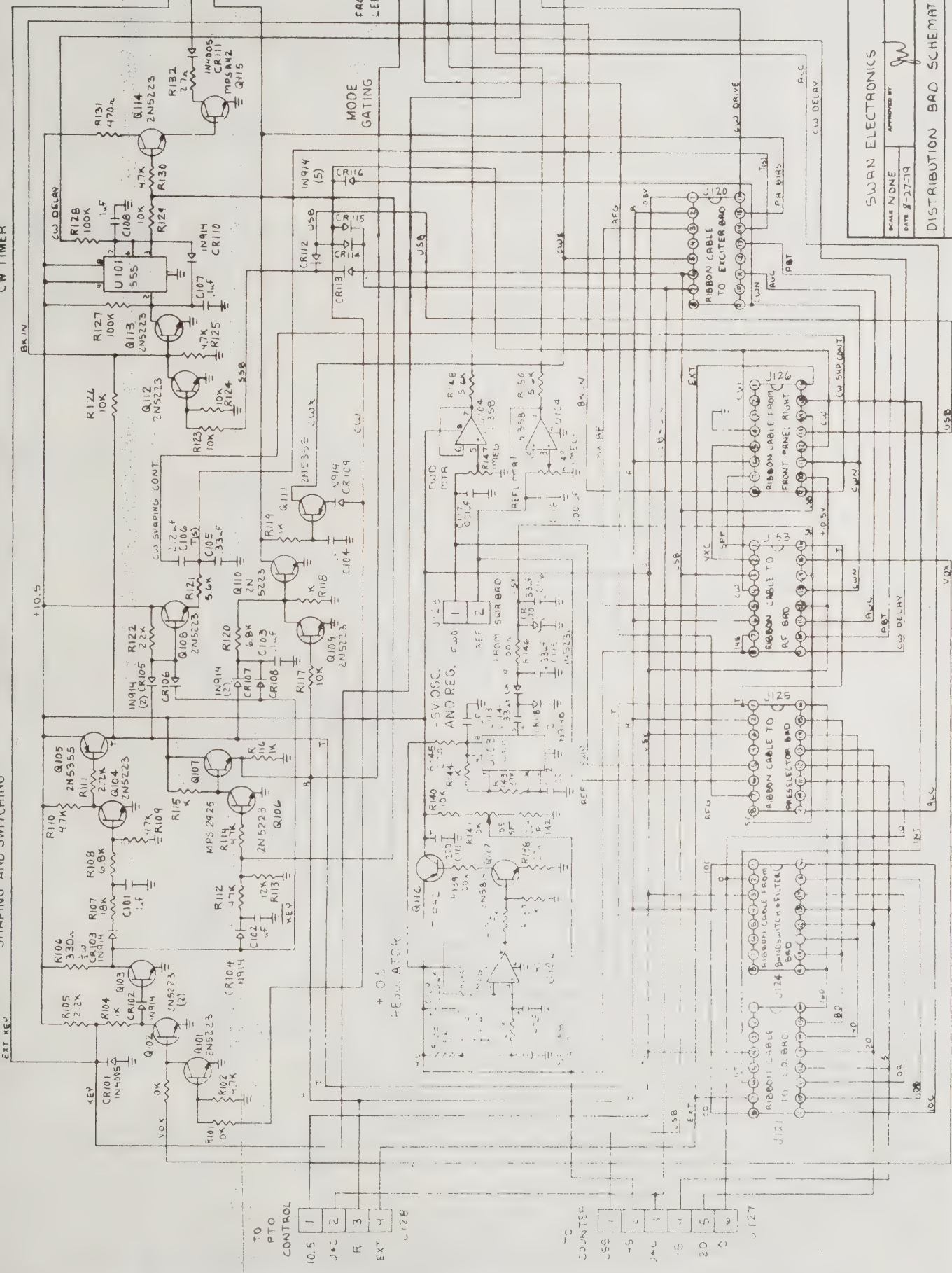
CONTROL VOLTAGE
SHAPING AND SWITCHING

CW TIMER

MODE
GATING

TO FRONT PANEL
LEFT (FPL)

TO REAR
CHASSIS
3 EXT KEY
2 EXT ALV
1 PA BIAS
CONTROL
J122



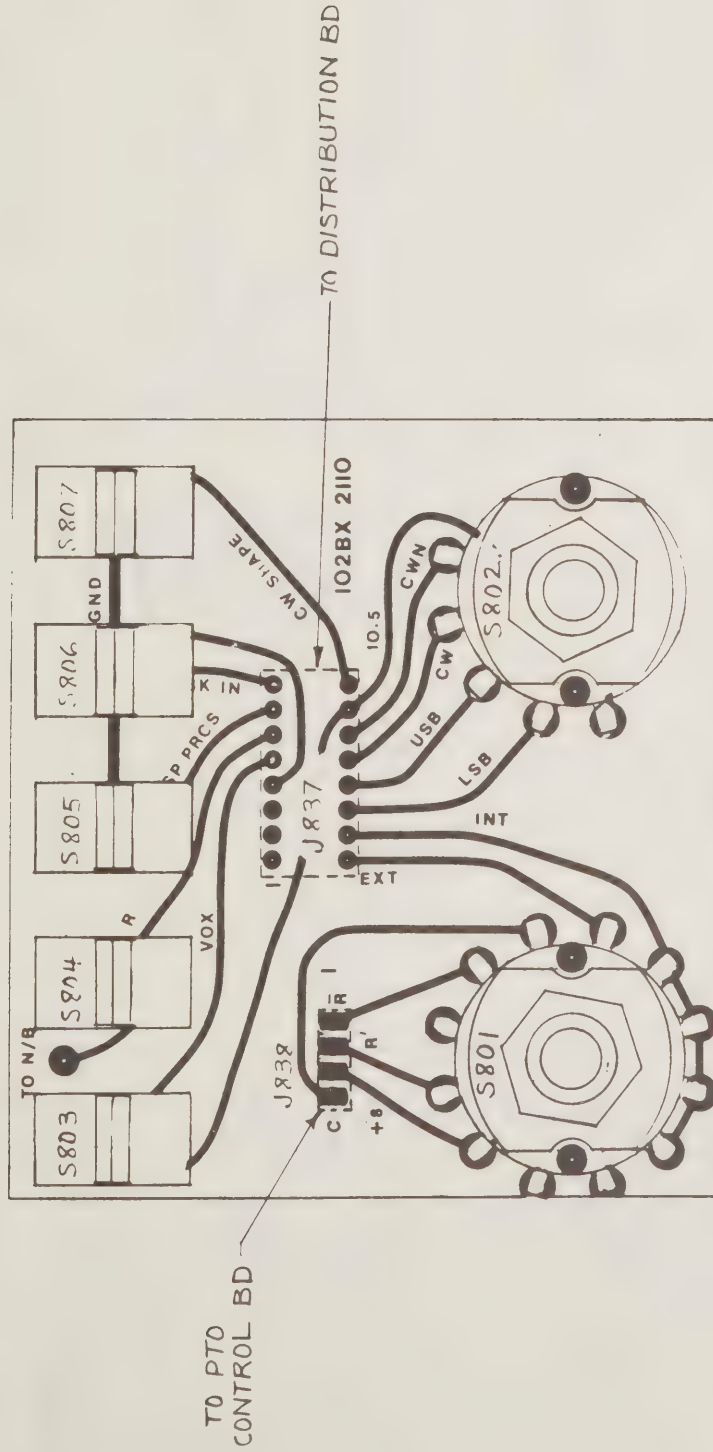
SWAN ELECTRONICS

SCALE NONE
DATE 8-27-79
APPROVED BY

DRAWN BY C. DAVIDSON
REVISED

DISTRIBUTION BAD SCHEMATIC

102B-2409



SWAN ELECTRONICS

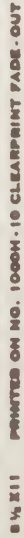
SCALE: 2 : 1
DATE: 9-12-79
APPROVED BY: *gw*
REVIEWED

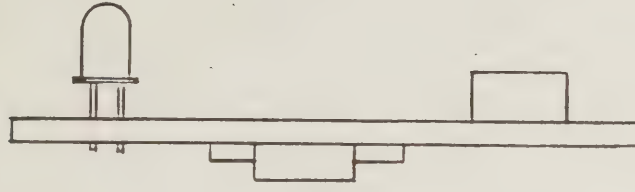
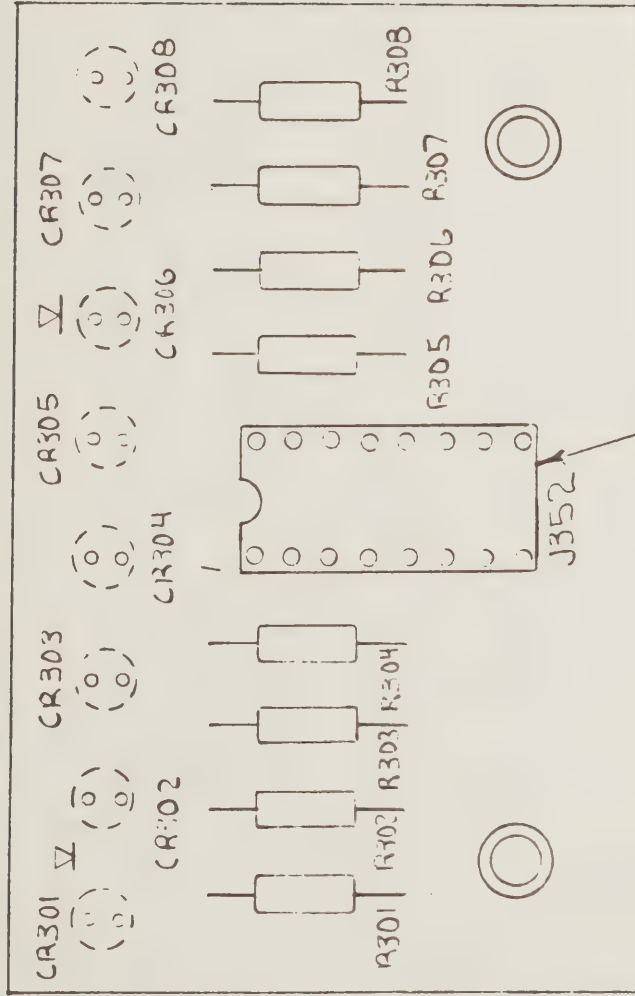
FRONT PANEL RIGHT BD LAYOUT

DRAWING NUMBER
102BX-231D

3. J837 & J838 ON FARSIDE.
 2. COMPONENT DESIGNATOR SERIES 7800.
 1. REF. ELECTRICAL ASSY 102BX-2010.
 - REF. CIRCUIT BOARD 102BX-2110.
 - REF. DRILL DRAWING 102BX-2210.
- NOTES:







TO AUDIO BD

SWAN ELECTRONICS

3. REF. ELECTRICAL ASSY 102 BX-2011
 - REF. CIRCUIT BOARD 102 BX-2111
 - REF. DRILL DWG 102 BX-2211
 2. LEADS MOUNTED FAR SIDE.
 1. COMPONENT DESIGNATORS 7300 SERIES
- NOTES

SCALE: NONE

APPROVED BY:

DRAWN BY ALG

DATE:

REVISED

PASSEAND IND. BD LAYOUT
102 BX

DRAWING NUMBER
102 BX-2311



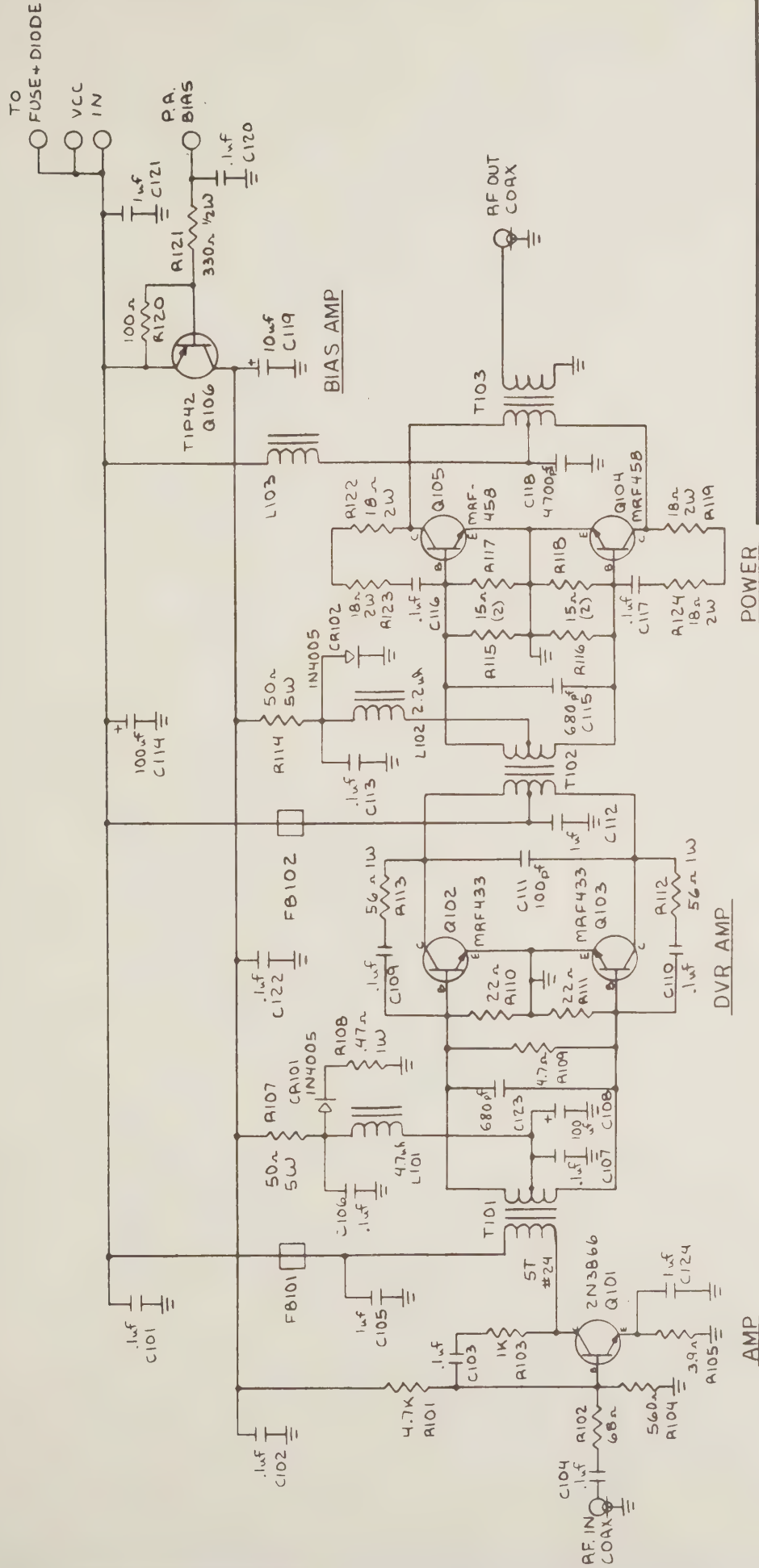
SCALE: NONE	APPROVED BY: 	DRAWN BY: DAVIDSON
DATE: 7-10-79		
		REVISED

PASSBAND INDICATOR BOARD SCHEMATIC

1. COMPONENT DESIGNATORS 7300 SERIES

NOTES:

DRAWING NUMBER
102B-2411



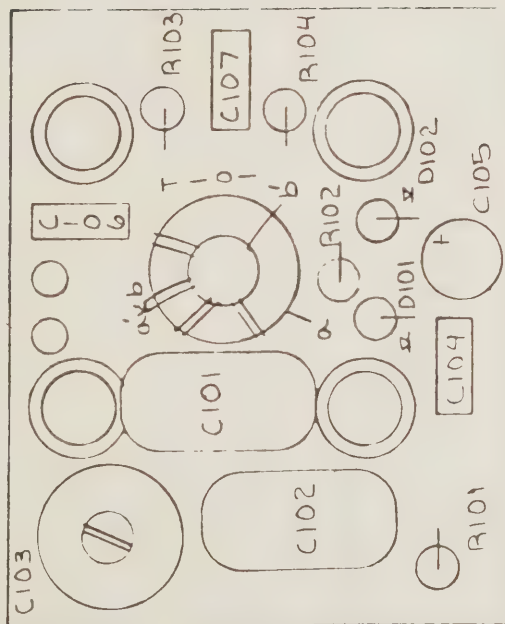
SWAN ELECTRONICS

SCALE: NONE	APPROVED BY:	DRAWN BY: DR/OSOR
DATE: 1-2-78	REVISED	
POWER AMP BOARD SCHEMATIC		
REV B	DESIGNED BY: B	0800-2402B

FCN/ B	REPLACED ALL .05μF CAPS WITH .1μF CD 5-30-79	DATE 6-1-79	APPROD JML
LTR	DESCRIPTION REVISIONS	DATE	APPROD

1. COMPONENT DESIGNATORS (6000 SERIES)

NOTES



SWAN ELECTRONICS

SCALE: NONE

APPROVED BY:

DRAWN BY C. DIVIDSON

DATE: 1-11-79

REVISED

SWR/WATTMETER BAD LAYOUT

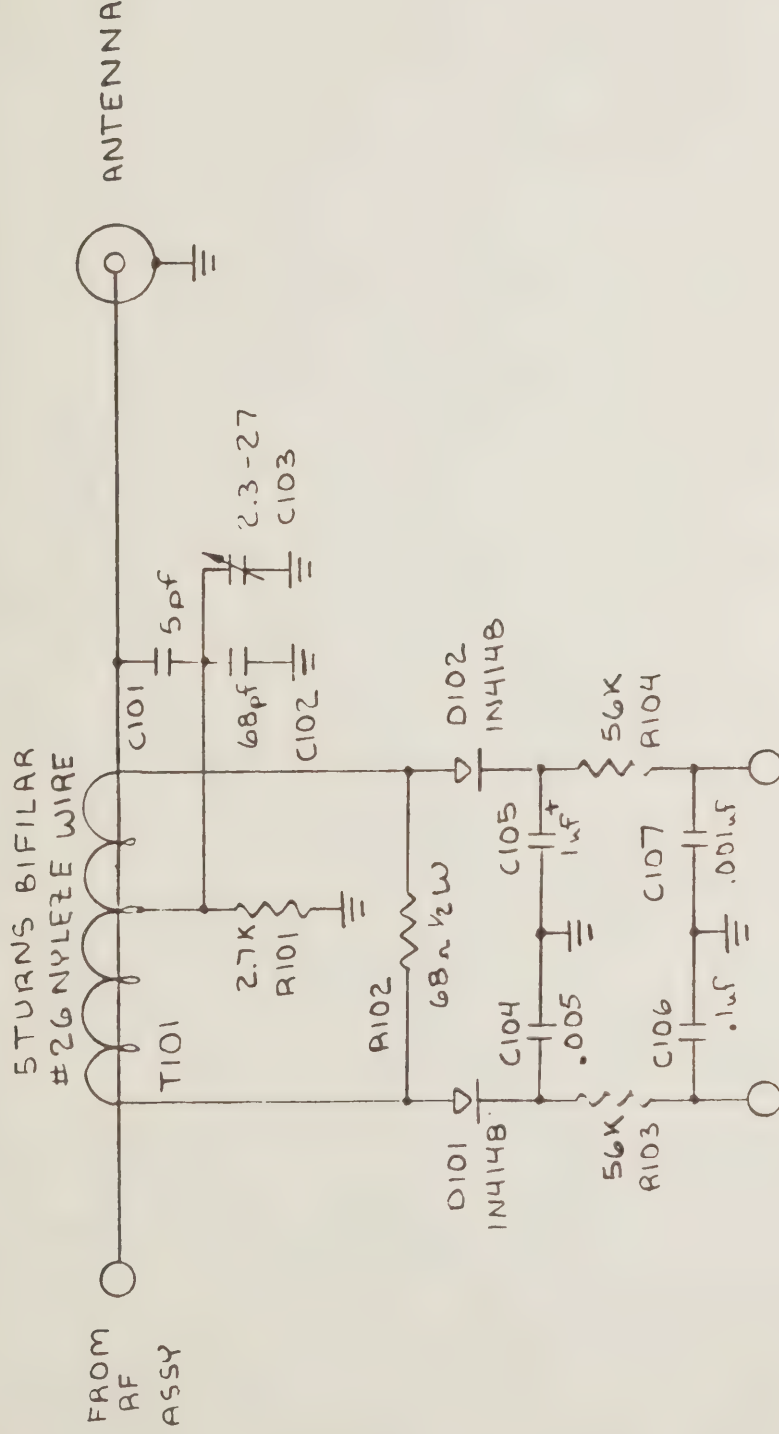
1. COMPONENT DESIGNATORS (7700 SERIES)

DRAWING NUMBER

0800-2303

REVISIONS

LTR	DESCRIPTION	DATE	APP'D
A	CHANGED C106 FROM .001 TO .1uF CD 8-24-79	8-24-79	gw



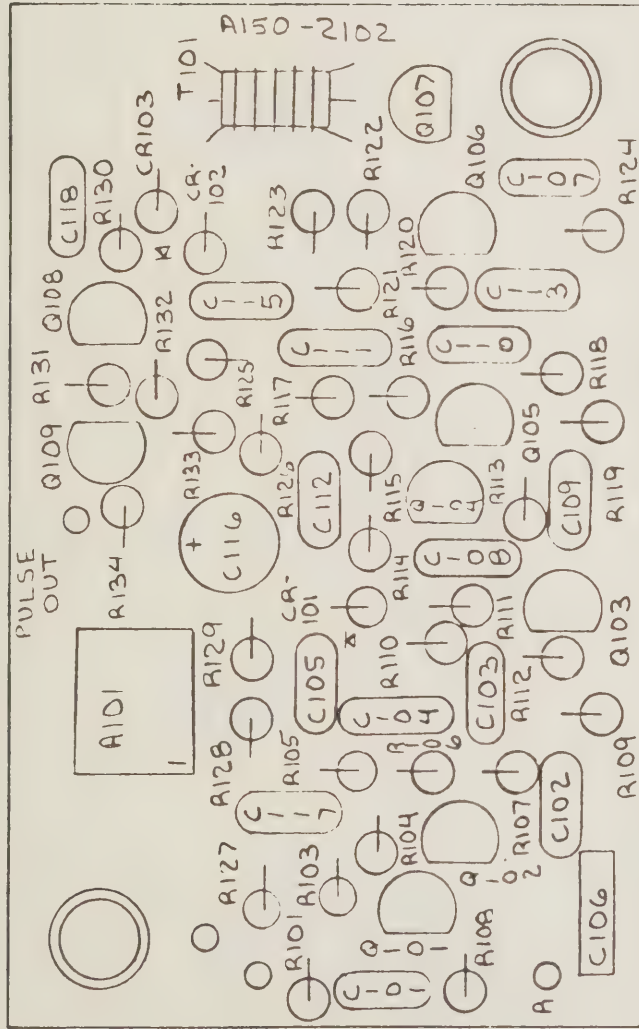
SWAN ELECTRONICS

SCALE: NONE	APPROVED BY:	DRAWN BY: DAVIDSON
DATE: 1-11-79	REVISED	

SWR/WATTMETER BRD SCHEMATIC

DRAWING NUMBER	0800-2403A
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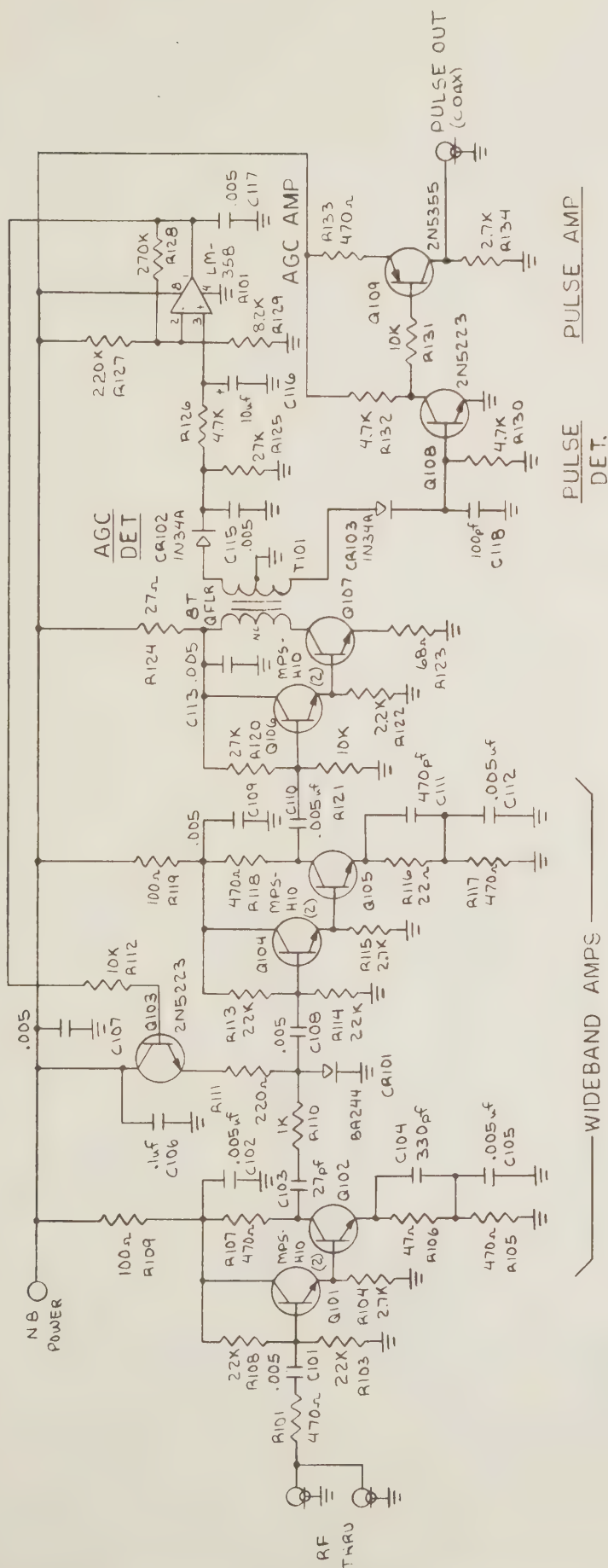
1. COMPONENT DESIGNATORS (7700 SERIES)
NOTES



SWAN ELECTRONICS

SCALE: NONE	APPROVED BY: <i>ju</i>	DRAWN BY: DAVID SBN
DATE: 1-12-79	REVISED	
A150 NOISE BLANKER BRD LAYOUT		
PROJ.	DRAWING NUMBER	
0176	0800-2304	

1. COMPONENT DESIGNATORS (7400 SERIES)
NOTES

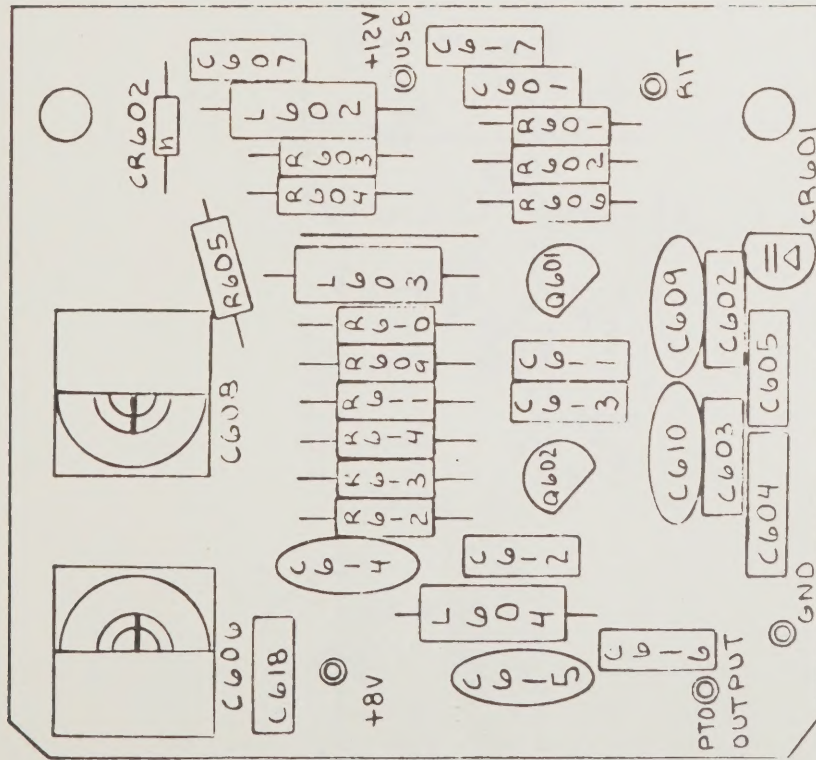


SWAN ELECTRONICS		DRAWING NUMBER 0800-2404B	
SCALE: NONE	APPROVED BY: <i>JW</i>	NOISE BLANKER BRD SCHEMATIC	
DATE 3-19-80	REVISED		

1. COMPONENT DESIGNATORS (7400 SERIES)

NOTES

11217 PHOTOCOPY FOR INFO THROUGH ELECTRONIC



SWAN ELECTRONICS

SCALE: NONE APPROVED BY:

DATE: 9-14-78

DRAWN BY: C. DAVIDSON

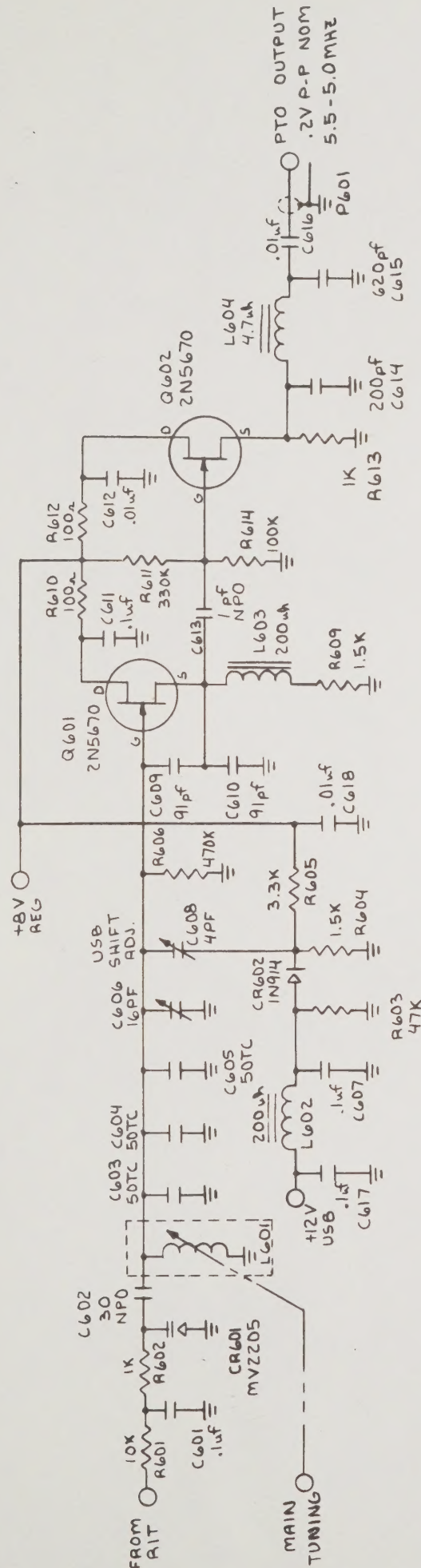
REVISED

PTO BRD LAYOUT

1. COMPONENT DESIGNATORS 7600 SERIES
NOTES

DRAWING NUMBER

0800-2305



SWAN ELECTRONICS

SCALE: NONE	APPROVED BY: C. DAVIDSON
DATE: 9-22-78	REVISED
PTO BAD SCHEMATIC (038-188A)	
DRAWING NUMBER 0800-2405	

1. COMPONENT DESIGNATORS 7600 SERIES
NOTES

